

=> fil reg
FILE 'REGISTRY' ENTERED AT 10:49:53 ON 04 SEP 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 3 SEP 2009 HIGHEST RN 1180131-54-7
DICTIONARY FILE UPDATES: 3 SEP 2009 HIGHEST RN 1180131-54-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

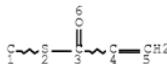
TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d que stat 115
L3 STR



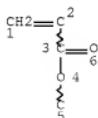
NODE ATTRIBUTES:

NSPEC IS RC AT 1
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
L4 STR



NODE ATTRIBUTES:

NSPEC IS RC AT 5
DEFAULT MLEVEL IS ATOM

September 4, 2009

10/553,488

2

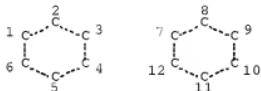
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L7 2527 SEA FILE=REGISTRY SSS FUL L3
L13 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L15 349 SEA FILE=REGISTRY SUB=L7 SSS FUL L3 AND L4 AND L13

100.0% PROCESSED 399 ITERATIONS 349 ANSWERS
SEARCH TIME: 00:00.01

=> d his nofile

(FILE 'HOME' ENTERED AT 10:21:10 ON 04 SEP 2009)

FILE 'HCAPLUS' ENTERED AT 10:22:43 ON 04 SEP 2009
L1 2 SEA SPE=ON ABB=ON PLU=ON US20070087123/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 10:22:56 ON 04 SEP 2009
L2 13 SEA SPE=ON ABB=ON PLU=ON (784208-48-6/B1 OR 117651-91-
9/B1 OR 13048-33-4/B1 OR 162881-26-7/B1 OR 1680-21-3/B1
OR 17831-71-9/B1 OR 2223-82-7/B1 OR 2399-48-6/B1 OR
4074-88-2/B1 OR 41637-38-1/B1 OR 845647-86-1/B1 OR
845647-87-2/B1 OR 845647-88-3/B1)

FILE 'LREGISTRY' ENTERED AT 10:23:15 ON 04 SEP 2009
L3 STR
L4 STR

FILE 'REGISTRY' ENTERED AT 10:30:01 ON 04 SEP 2009
L5 31 SEA SSS SAM L3 AND L4
L6 28 SEA SSS SAM L3
L7 2527 SEA SSS FUL L3
L8 5 SEA SPE=ON ABB=ON PLU=ON L2 AND L7
SAV L7 PEZ488/A
L9 STR
L10 24 SEA SUB=L7 SSS SAM L3 AND L4 AND L9

L11 578 SEA SUB=L7 SSS FUL L3 AND L4 AND L9
 SAV L11 PEZ488S1/A

L12 4 SEA SPE=ON ABB=ON PLU=ON L2 AND L11
 STR L9

L14 17 SEA SUB=L7 SSS SAM L3 AND L4 AND L13

L15 349 SEA SUB=L7 SSS FUL L3 AND L4 AND L13
 4 SEA SPE=ON ABB=ON PLU=ON L2 AND L15
 SAV L15 PEZ488S2/A

FILE 'HCAPLUS' ENTERED AT 10:38:23 ON 04 SEP 2009
 6 SEA SPE=ON ABB=ON PLU=ON L16
 D AN 6

L18 140 SEA SPE=ON ABB=ON PLU=ON L15
 L19 116 SEA SPE=ON ABB=ON PLU=ON L18 AND (PY<=2003 OR
 PRY<=2003 OR AY<=2003)

FILE 'REGISTRY' ENTERED AT 10:39:10 ON 04 SEP 2009
 1316 SEA SPE=ON ABB=ON PLU=ON 41637-38-1/CRN
 44 SEA SPE=ON ABB=ON PLU=ON L15 AND L20

FILE 'HCAPLUS' ENTERED AT 10:41:00 ON 04 SEP 2009
 26 SEA SPE=ON ABB=ON PLU=ON L21
 19 SEA SPE=ON ABB=ON PLU=ON L22 AND L19
 L24 QUE SPE=ON ABB=ON PLU=ON (PHOTO OR LIGHT)(A)(SENS? OR
 REACTIV? OR ACTIV? OR POLYMERIZ? OR CURABLE OR LINK?) OR
 PHOTOSENS? OR LIGHTSENS? OR PHOTOACTIVE? OR PHOTOREACTIV?
 OR PHOTOLINK? OR PHOTOCURABLE OR PHOTOPOLYMERIZ? OR
 PHOTOCHEM#(A)(ACTIVE? OR REACTIVE? OR LINK?)
 8 SEA SPE=ON ABB=ON PLU=ON L23 AND L24
 2 SEA SPE=ON ABB=ON PLU=ON L25 AND L1
 6 SEA SPE=ON ABB=ON PLU=ON L25 NOT L26
 L28 11 SEA SPE=ON ABB=ON PLU=ON L23 NOT (L26 OR L27)
 L29 24 SEA SPE=ON ABB=ON PLU=ON L19 AND L24
 L30 16 SEA SPE=ON ABB=ON PLU=ON L29 NOT (L26 OR L27 OR L28)

=> fil hcap
 FILE 'HCAPLUS' ENTERED AT 10:50:02 ON 04 SEP 2009
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 4 Sep 2009 VOL 151 ISS 11
 FILE LAST UPDATED: 3 Sep 2009 (20090903/ED)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

=> d ibib abs fhitstr hitind l26 1-2

L26 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:433892 HCAPLUS Full-text
 DOCUMENT NUMBER: 146:423174
 TITLE: Photocurable adhesive composition and its use in the optical field
 INVENTOR(S): Weber, Steven; Jiang, Peiqi; Turshani, Yassin; Jallouli, Aref
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale D'Optique, Fr.
 SOURCE: U.S. Pat. Appl. Publ., 25pp., Cont.-in-part of U.S. Ser. No. 417,525, abandoned.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 20070087123	A1	20070419	US 2006-553488	200608 09
				<--
WO 2004092787	A1	20041028	WO 2004-EP4114	200404 15
				<--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:		US 2003-417525	B2	200304
				17

<--

AB The invention concerns a photocurable adhesive composition comprising, based on total weight of photopolymerizable monomers and/or oligomers of the composition: 5 to 60% of at least one mono or polyacrylate monomer or oligomer thereof (A); 5 to 50% of at least one thio(meth)acrylate monomer or oligomer thereof (B); and 20 to 50% of at least one aromatic dimethacrylate monomer or oligomer thereof (C); with the proviso that the composition does not contain a brominated monofunctional acrylate.

IT 784208-48-6P Bis(methacryloylthioethyl)sulfide-Diethyleneglycol diacrylate-ethoxylated bisphenol A dimethacrylate copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photocurable adhesive composition and its use in the optical field)

RN 784208-48-6 HCPLUS

CN 2-Propenoic acid, 1,1'-(oxydi-2,1-ethanediyl) ester, polymer with α,α' -[(1-methylethyldene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl)] and S1,S1'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3



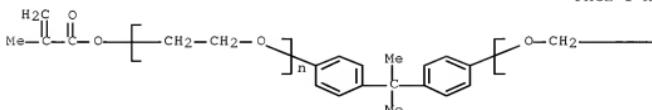
CM 2

CRN 41637-38-1

CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



CM 3

CRN 4074-88-8
CMF C10 H14 O5

INCL 427355000; 522178000; 156332000; 156295000; 156275700
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42, 73
 ST photocurable adhesive optical material lens coating
 IT Lenses
 (blank; photocurable adhesive composition and its use in the
 optical field)
 IT Coating materials
 Optical materials
 (photocurable adhesive composition and its use in the
 optical field)
 IT Adhesives
 (photocurable; photocurable adhesive composition
 and its use in the optical field)
 IT Polycarbonates, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (support; photocurable adhesive composition and its use in
 the optical field)
 IT Plastics, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (thermoplastics; photocurable adhesive composition and its
 use in the optical field)
 IT 784208-48-6P, Bis(methacryloyloxyethyl)sulfide-
 Diethyleneglycol diacrylate-ethoxylated bisphenol A dimethacrylate
 copolymer 845647-86-1P 845647-87-2P
 845647-88-3P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (photocurable adhesive composition and its use in the
 optical field)

L26 ANSWER 2 OF 2 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:906019 HCPLUS Full-text
 DOCUMENT NUMBER: 141:380799
 TITLE: Photocurable adhesive composition and
 its use in the optical field
 INVENTOR(S): Weber, Steven; Jiang, Peiqi; Turshani, Yassin;
 Jallouli, Aref
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale
 d'Optique, Fr.

September 4, 2009

10/553,488

7

SOURCE: PCT Int. Appl., 68 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004092787	A1	20041028	WO 2004-EP4114	200404 15
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				<--
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
AU 2004230413	A1	20041028	AU 2004-230413	200404 15
CA 2522468	A1	20041028	CA 2004-2522468	200404 15
CA 2522468	C	20090811		<--
EP 1629308	A1	20060301	EP 2004-727565	200404 15
EP 1629308	B1	20081008		<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 200409388	A	20060418	BR 2004-9388	200404 15
CN 1806186	A	20060719	CN 2004-80016798	200404 15
JP 2006526037	T	20061116	JP 2006-505182	200404 15
AT 410708	T	20081015	AT 2004-727565	200404 15
ES 2314392	T3	20090316	ES 2004-727565	200404

				15
			<--	
IN 2005DN04697	A	20070817	IN 2005-DN4697	200510 17
			<--	
US 20070087123	A1	20070419	US 2006-553488	200608 09
			<--	
PRIORITY APPLN. INFO.:			US 2003-417525	A 200304 17
			<--	
			WO 2004-EP4114	W 200404 15

AB Photocurable adhesive compns. are described which comprise (based on total weight of photopolymerizable monomers and/or oligomers) 5-60 weight % of ≥ 1 mono or polyacrylate monomer or oligomer; 5-50 weight % of ≥ 1 thio(meth)acrylate monomer or oligomer; and 20-50 weight % of ≥ 1 aromatic dimethacrylate monomer or oligomer; with the restriction that the composition does not contain a brominated monofunctional acrylate. Methods for transferring coatings from supports to thermoplastic substrates using the adhesives are also described. The substrates may be lenses, especially ophthalmic lenses. The coatings may comprise a hydrophobic top coat, an antireflective coating layer, an anti-abrasion coating layer, an impact resistant coating layer, a photochromic coating layer, a dying coating layer, a polarized coating layer, a printed layer or a stack of ≥ 2 of these coating layers. Overmolding processes are also described which produce a substrate overmolded with a cured layer of the curable adhesive composition. Processes are also described for producing laminated thermoplastic articles (e.g., ophthalmic lenses) by joining elements using the adhesives.

IT 784208-48-6, Bis-2-(methacryloylthioethyl)sulfide-diethylene glycol diacrylate-ethoxylated bisphenol A dimethacrylate copolymer

RL: TEM (Technical or engineered material use); USES (Uses)
(photocurable adhesive compns. and their uses)

RN 784208-48-6 HCPLUS

CN 2-Propenoic acid, 1,1'-(oxydi-2,1-ethanediyl) ester, polymer with α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl)] and S1,S1'-(thiodi-2,1-ethanediyl) bis(2-methyl-1-propenethioate) (CA INDEX NAME)

CM 1

CRN 117651-91-9

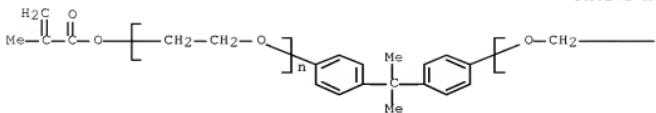
CMF C12 H18 O2 S3



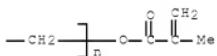
CM 2

CRN 41637-38-1
 CMF (C₂ H₄ O)_n (C₂ H₄ O)_n C23 H24 O4
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 3

CRN 4074-88-8
 CMF C10 H14 O5



- IC ICM G02B001-04
 ICS G02B001-10; C09J004-00; C09J133-14; C08F220-38
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 37, 63, 73
 ST bromoacrylate free photocurable adhesive compn;
 photocurable adhesive compn; coating transfer
 photocurable adhesive compn; overmolding process
 photocurable adhesive compn; thermoplastic laminate
 formation photocurable adhesive compn; ophthalmic lens
 photocurable adhesive compn
 IT Optical materials
 (adhesives; photocurable adhesive compns. and their
 uses)
 IT Adhesives
 (optical; photocurable adhesive compns. and their uses)
 IT Coating process
 Lamination
 Molding of plastics and rubbers
 (photocurable adhesive compns. and their uses in)
 IT Eyeglass lenses
 Lenses
 (photocurable adhesive compns. and their uses in
 producing)

IT Polycarbonates, uses
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
 (photocurable adhesive compns. and their uses with)

IT Adhesives
 (photocurable; photocurable adhesive compns.
 and their uses)

IT Plastics, uses
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
 (thermoplastics; photocurable adhesive compns. and their uses with)

IT 162881-26-7, Irgacure 819
 RL: CAT (Catalyst use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (photocurable adhesive compns. and their uses)

IT 1680-21-3, Triethylene glycol diacrylate 2223-82-7, Neopentyl glycoldiacrylate 2399-48-6, Tetrahydrofurfuryl acrylate 4074-88-8, Diethylene glycol diacrylate 13048-33-4, 1,6-Hexanediol diacrylate 17831-71-9, Tetraethylene glycol diacrylate 41637-38-1, Ethoxylated bisphenol A dimethacrylate 117651-91-9, Bis-2-(methacryloyloxyethylsulfide) sulfide 784208-48-6, Bis-2-(methacryloyloxyethylsulfide)-diethylene glycol diacrylate-ethoxylated bisphenol A dimethacrylate copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photocurable adhesive compns. and their uses)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs fhitstr hitind 127 1-6

L27 ANSWER 1 OF 6 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:160856 HCPLUS Full-text
 DOCUMENT NUMBER: 1421241788
 TITLE: Photocurable adhesive composition and its use in the optical field
 INVENTOR(S): Weber, Steven; Jiang, Peiqi; Turshani, Yassin; Jallouli, Aref
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale d'Optique, Fr.
 SOURCE: U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 417,525, abandoned.
 CODEN: USXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 20050043430	A1	20050224	US 2004-862693	200406 07

CN 1806186	A	20060719	CN 2004-80016798	<-- 200404 15
AT 410708	T	20081015	AT 2004-727565	<-- 200404 15
ES 2314392	T3	20090316	ES 2004-727565	<-- 200404 15
PRIORITY APPLN. INFO.:				<-- US 2003-417525 B2 200304 17
<--				

AB The invention concerns a photocurable adhesive composition comprising, based on total weight of photopolymerizable monomers and/or oligomers of the composition: 5 to 60% of at least one mono or polyacrylate monomer or oligomer thereof (A); 5 to 50% of at least one thio(meth)acrylate monomer or oligomer thereof (B); and 20 to 50% of at least one aromatic dimethacrylate monomer or oligomer thereof (C); with the proviso that the composition does not contain a brominated monofunctional acrylate.

IT 784208-48-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable adhesive composition and its use in the optical field)

RN 784208-48-6 HCAPLUS

CN 2-Propenoic acid, 1,1'-(oxydi-2,1-ethanediyl) ester, polymer with α,α' -[(1-methyl ethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl)] and S1,S1'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3



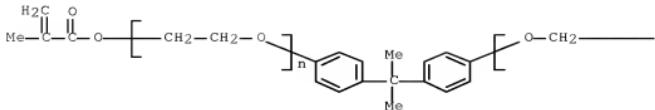
CM 2

CRN 41637-38-1

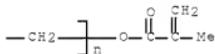
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



CM 3

CRN 4074-88-8

CMF C10 H14 O5



IC ICM C08F012-30

ICS C08J003-28

INCL 522114000; X52-631.9; X52-628.6; X52-211.7; X52-211.8

CC 38-3 (Plastics Fabrication and Uses)

ST photocurable adhesive acrylate

IT Lenses

(blanks; photocurable adhesive composition and its use in
the optical field)

IT Eyeglass lenses

(photocurable adhesive composition and its use in the
optical field)

IT Adhesives

(photocurable; photocurable adhesive composition
and its use in the optical field)

IT Polycarbonates, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(substrate; photocurable adhesive composition and its use in
the optical field)

IT Plastics, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(thermoplastics, substrate; photocurable adhesive
composition and its use in the optical field)

IT 784208-48-6P 845647-86-1P

845647-87-2P 845647-88-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)

(photocurable adhesive composition and its use in the
optical field)

L27 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:417522 HCAPLUS Full-text
 DOCUMENT NUMBER: 139:7676
 TITLE: Radical-polymerizable compositions for
 manufacture of impact-resistant eyeglass lenses
 INVENTOR(S): Richard, Gilles; Primel, Odile; Yean, Leanirith
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale
 d'Optique, Fr.
 SOURCE: Fr. Demande, 30 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2832717	A1	20030530	FR 2001-15273	200111 26
FR 2832717	B1	20040709		<--
WO 2003046028	A1	20030605	WO 2002-FR4050	200211 26
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			<--	
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002364405	A1	20030610	AU 2002-364405	200211 26
EP 1453874	A1	20040908	EP 2002-799758	200211 26
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK JP 2005510594 T 20050421 JP 2003-547475			<--	
JP 2005510594	T	20050421	JP 2003-547475	200211 26
US 20050107537	A1	20050519	US 2004-496743	200412 09
US 7393880	B2	20080701	FR 2001-15273	<--
PRIORITY APPLN. INFO.:			A	200111

26
 <--
 WO 2002-FR4050 W
 200211 26

<--

AB Compns. for the title use are based on (A) containing ≥15% (based on components A and B) oligomer having ≥2 radical-polymerizable groups that (co)polymerize to products with glass temperature <50° and (B) ≥1 (meth)acrylic monomer having a group that promotes H bonding at concns. ≥15 or 35% (based on components A and B) when this monomer is methacrylic or acrylic, resp. A typical composition contained ethoxyxlated bisphenol A dimethacrylate (d.p. 30) 60, methacrylic acid 40, and photopolymer initiator 0.1 parts.

IT 496045-26-2P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (radical-polymerizable compns. for manufacture of impact-resistant eyeglass lenses)

RN 496045-26-2 HCPLUS

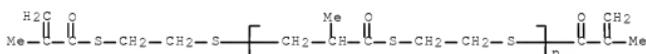
CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with α,α' -[(1-methylallylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxyl]poly(oxyl-1,2-ethanediyl)] and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)thio]ethyl]thio]poly[thio-1,2-ethanediylthio(2-methyl-1-oxo-1,3-propanediyil)] (9CI) (CA INDEX NAME)

CM 1

CRN 393137-65-0

CMF (C6 H10 O S2)n C10 H14 O2 S2

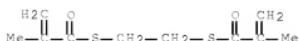
CCI PMS



CM 2

CRN 117675-95-3

CMF C10 H14 O2 S2



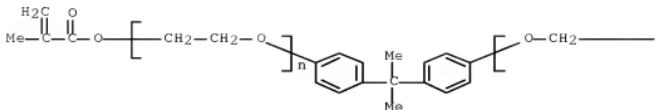
CM 3

CRN 41637-38-1

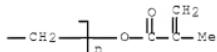
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



IC ICM C08F222-20
 ICS G02B001-04; C08F220-06
 CC 37-6 (Plastics Manufacture and Processing)
 IT 86124-28-9P, Ethoxylated bisphenol A dimethacrylate-methacrylic acid copolymer 496045-26-2P 532984-93-3P, Acrylic acid-Craynor CN 965 copolymer 532984-94-4P, Methacrylic acid-polypropylene glycol dimethacrylate copolymer 532987-59-0P, Ethoxylated bisphenol A dimethacrylate-methacrylic acid-polypropylene glycol dimethacrylate copolymer 532987-61-4P, Ethoxylated bisphenol A dimethacrylate-methacrylic acid-mono(2-methacryloyloxyethyl) phthalate copolymer
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (radical-polymerizable compns. for manufacture of impact-resistant eyeglass lenses)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 6 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:793914 HCPLUS [Full-text](#)
 DOCUMENT NUMBER: 135:345506
 TITLE: Light-resistant microlens array for optical imaging device
 INVENTOR(S): Watanabe, Yuji; Kitamura, Kyoji; Hegi, Yasuhiro; Doi, Hitoshi
 PATENT ASSIGNEE(S): Omron Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
-----	----	-----	-----	-----

September 4, 2009

10/553,488

16

JP 2001305305

A

20011031

JP 2000-125670

200004

26

<--

PRIORITY APPLN. INFO.:

JP 2000-125670

200004

26

<--

OTHER SOURCE(S): MARPAT 135:345506

AB Title microlens array is made of (meth)acrylate resin-based layers of (A) a high and (B) a low refractive index, resp., wherein at least layer (A) contains benzotriazole-based light stabilizers. Thus, a high-refractive-index layer was prepared from bis(4-methacryloyl thiophenyl) sulfide (MPSMA) 60, phenoxyethyl acrylate (SR-339A) 40, a phosphorus compound photoinitiator 1,5, 2-(2-hydroxy-3-dimethylbenzyl-5-(1,1,3,3-tetramethylbutyl)phenyl)-2H-benzotriazole Tinuvin 928 4 wt%.

IT 371976-64-6P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of light-resistant microlens array for optical imaging device)

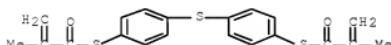
RN 371976-64-6 HCPLUS

CN 2-Propenoic acid, 2-phenoxyethyl ester, polymer with S,S'-{(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate)} (9CI)
(CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3



CM 2

CRN 48145-04-6

CMF C11 H12 O3



IC ICM G02B003-00

ICS C08F002-50; C08F020-38; C08K005-3475; C08L033-14; G02B001-04;
G02F001-1335

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 74

IT Polymerization catalysts

(photopolymn.; preparation of light-resistant microlens
array for optical imaging device)

September 4, 2009

10/553,488

17

IT 371788-54-4P 371976-64-6P 371976-65-7P
 371976-66-8P

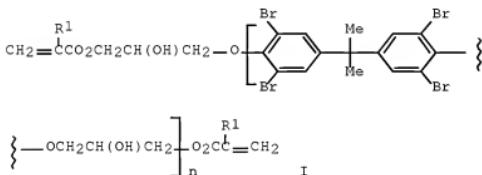
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of light-resistant microlens array for optical imaging device)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L27 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:336536 HCAPLUS Full-text
 DOCUMENT NUMBER: 134:334013
 TITLE: Photocurable polymer lens
 INVENTOR(S): Oshikiri, Tatsuya; Oyaizu, Yasushi; Uno, Kenji
 PATENT ASSIGNEE(S): Seed Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001124903	A	20010511	JP 1999-303831	199910 26
<--				
PRIORITY APPLN. INFO.: JP 1999-303831				199910 26
<--				

GI



AB The invention refers to a photocurable polymer comprising 10 - 70% brominated Bisphenol A epoxy(meth)acrylate I ($\text{R}^1 = \text{H}$ or methyl; $n = \text{integer}$), 30 - 90% of other (meth)acrylate compds., and 0 - 50% copolymer monomer which is used to produce a lens with $n = 1.58$, $d = 1.5$, and Abbe number ≥ 30 .

IT 336850-98-7

RL: DEV (Device component use); USES (Uses)
 (photocurable polymer lens)

RN 336850-98-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-,
 (1-methylallylidene)bis[(2,6-dibromo-4,1-phenylene)oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with
 α,ω' -[(1-methylallylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and
 S,S' -(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (9CI)
 (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3

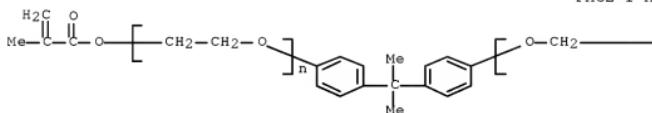


CM 2

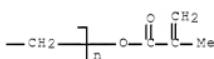
CRN 41637-38-1

CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A



PAGE 1-B

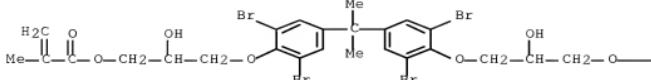


CM 3

CRN 17658-95-6

CMF C29 H32 Br4 O8

PAGE 1-A



PAGE 1-B



IC ICM G02B001-04
 ICS C08F002-48; C08F290-06; G02C007-02
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 ST photocurable polymer lens brominated bisphenol A epoxy methacrylate
 IT Lenses
 (photocurable polymer lens)
 IT Acrylic polymers, uses
 RL: DEV (Device component use); USES (Uses)
 (photocurable polymer lens)
 IT 336850-98-7 336850-99-8 336851-00-4
 336851-01-5 336851-02-6
 RL: DEV (Device component use); USES (Uses)
 (photocurable polymer lens)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L27 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999;659432 HCAPLUS Full-text
 DOCUMENT NUMBER: 131:287251
 TITLE: Polymerizable composition for making optical lens with high refractive index and high abbe number, and resulting lens
 INVENTOR(S): Jiang, Peiqi; Widawski, Gilles; Menduni, Gilbert
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale d'Optique, Fr.
 SOURCE: PCT Int. Appl., 48 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
WO 9951652	A1	19991014	WO 1999-FR726	199903

 29
 <-->

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,
 CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN,
 IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
 MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
 SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE,
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

FR 2777008 A1 19991008 FR 1998-4190

199804
03

<--

FR 2777008 B1 20000512
 AU 9929401 A 19991025 AU 1999-29401

199903
29

<--

EP 986590 A1 20000322 EP 1999-910450

199903
29

<--

EP 986590 B1 20040121
 R: DE, ES, FR, GB, IT
 JP 2002500700 T 20020108 JP 1999-550119

199903
29

<--

JP 4312268 B2 20090812
 US 6479606 B1 20021112 US 1999-452740

199912
01

<--

US 20030109655 A1 20030612 US 2002-225327

200208
21

<--

US 6627718 B2 20030930 FR 1998-4190 A
 PRIORITY APPLN. INFO.: 199804
 03

199804
03

<--

WO 1999-FR726 W

199903
29

<--

US 1999-452740 A1

199912
01

<--

AB Said composition of polymerizable monomers comprises: (A) at least a polythio(meth)acrylate monomer, (B) at least a monomer forming a homopolymer with high Abbe number comprising at least 2 polymerizable groups, and at least one crosslinked polycyclic constitutive unit, the crosslinked polycyclic constitutive unit(s) not being directly bound to the oxygen atom, (C) at least a polythiol monomer, and optionally, (D) at least another monomer copolymerizable with (A), (B) and (C), the composition being free of all monomers comprising one or several vinyl functional groups, other than (meth)acrylic or thio(meth)acrylic groups, and different from monomers (B). A typical composition contained 50 parts bis(2-methacryloylthioethyl) sulfide, 35 parts diacryloyloxymethyltricyclodecane, 15 parts pentaerythritol

tetrakis(thioglycolate), and 0.1% each UV absorber, antioxidant, photoinitiator, and thermal initiator.

IT 246510-49-6P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
 (polymerizable compns. for making optical lens with high refractive index and high abbe number)

RN 246510-49-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
 (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyoxy-2,1-ethanediyl) ester, polymer with
 2,2-bis([(mercaptoacetyl)oxy]methyl)-1,3-propanediyl
 bis(mercaptoacetate), (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) di-2-propenoate and S,S'-(thiodi-2,1-ethanediyl)
 bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3

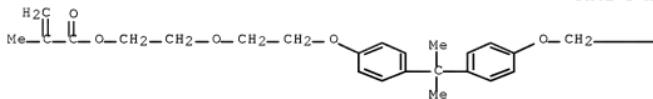


CM 2

CRN 56744-60-6

CMF C31 H40 O8

PAGE 1-A



PAGE 1-B

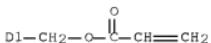
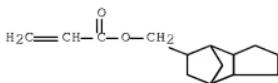


CM 3

CRN 42594-17-2

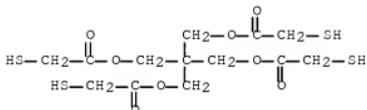
CMF C18 H24 O4

CCI IDS



CM 4

CRN 10193-99-4
CMF C13 H20 O8 S4



IC ICM C08F228-02
 ICS G02B001-04
 CC 37-3 (Plastics Manufacture and Processing)
 IT Polymerization
 (photopolymer.; of acrylic monomers containing polycyclic
 groups and polythiols in manufacture of lenses)
 IT 246510-48-5P 246510-49-6P 246510-50-9P 246510-52-1P
 246510-54-3P 246510-56-5P 246510-58-7P
 246536-40-3P
 RL: DEV (Device component use); IMF (Industrial manufacture); PRP
 (Properties); PREP (Preparation); USES (Uses)
 (polymerizable comps. for making optical lens with high
 refractive index and high abbe number)
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
 RECORD (3 CITINGS)
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT

L27 ANSWER 6 OF 6 HCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:38802 HCPLUS Full-text
DOCUMENT NUMBER: 126:60510
ORIGINAL REFERENCE NO.: 126:11883a,11886a
TITLE: Monomers containing thio(meth)acrylates giving transparent polymers
INVENTOR(S): Jiang, Peiqi
PATENT ASSIGNEE(S): Essilor International (Compagnie Generale D'optique), Fr.
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 745621	A1	19961204	EP 1996-401065	199605 15
EP 745621 R: DE, ES, FR, FR 2734828	B1 GB, IT A1	19980415 19961206	<-- FR 1995-6443	199505 31
FR 2734828 ES 2118008	B1 T3	19970711 19980901	<-- ES 1996-401065	199605 15
AU 9654563	A	19961212	AU 1996-54563	199605 29
AU 705542 JP 09025321	B2 A	19990527 19970128	<-- JP 1996-134679	199605 29
JP 3682118 US 6184323	B2 B1	20050810 20010206	<-- US 1998-116143	199807 15
PRIORITY APPLN. INFO.:			FR 1995-6443	A 199505 31
			<-- US 1996-651283	B1 199605 22
AB	<-- The title monomers, capable of rapid photopolym., contain the thio(meth)acrylates CH ₂ :C(R1)COSCH ₂ CH ₂ SCOC(R2):CH ₂ (I) and, optionally, CH ₂ :C(R1)COSC ₆ H ₄ SCG ₆ H ₄ SCOC(R2):CH ₂ (R1, R2 = H, Me) 10-70, ethoxylated bisphenol A di(meth)acrylates 10-60, aromatic or polycyclic (meth)acrylates 5-30, polyoxalkylene di(meth)acrylates 0-15, and polythiols 0-10%. A mixture of I (R1, R2 = Me) 35, ethoxylated (d.p. 2.6) bisphenol A dimethacrylate 55, 2-[(tribromophenyl)oxylethyl acrylate 5, Ph methacrylate 5, Irgacure-184 0.05, and diphenyl(2,4,6-trimethylbenzoyl)phosphine 0.1 part was exposed to UV light (80 W/cm ²) for 3 min on each side to give a sheet with transmission 91%, n 1.5910, Abbe number 43.5, d. 1.2713, and good surface appearance and temperature resistance.			
IT	185138-88-9P RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation) (monomers containing thio(meth)acrylates giving transparent polymers)			
RN	185138-88-9 HCPLUS			
CN	2-Propenoic acid, 2-methyl-, phenyl ester, polymer with			

a,a'-[(1-methylethyldene)di-4,1-phenylene]bis[*ω*-
[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)],
S,S'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) and
2-(tribromophenoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3



CM 2

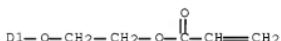
CRN 54363-46-1

CMF C11 H9 Br3 O3

CCI IDS



3 (D1—Br)



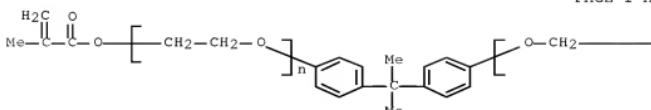
CM 3

CRN 41637-38-1

CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



CM 4

CRN 2177-70-0
CMF C10 H10 O2

IC ICM C08F228-02
 ICS G02B001-04
 CC 35-4 (Chemistry of Synthetic High Polymers)
 IT Polymerization
 (photopolymn.; photopolymn. of monomers
 containing thio(meth)acrylates giving transparent polymers)
 IT 185138-88-9P 185138-90-3P
 185138-93-6P 185138-95-8P 185138-97-0P
 185138-99-2P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP
 (Preparation)
 (monomers containing thio(meth)acrylates giving transparent polymers)
 OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS
 RECORD (12 CITINGS)

=> d ibib abs fhitstr hitind l28 1-11

L28 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:117881 HCAPLUS Full-text
 DOCUMENT NUMBER: 138:154354
 TITLE: High-refractive-index optical resin compositions
 INVENTOR(S): Smith, Robert A.; Okoroafor, Michael O.; Herold,
 Robert D.; Freeman, T. Edwin
 PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA
 SOURCE: PCT Int. Appl., 46 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
WO 2003011926	A1	20030213	WO 2001-US23394	200107

25

<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
 NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
 TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
 TD, TG

AU 2001278005 A1 20030217 AU 2001-278005

200107
25

EP 1412402 A1 20040428 EP 2001-955957

200107
25

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 JP 2004536934 T 20041209 JP 2003-517113

200107
25

PRIORITY APPLN. INFO.: WO 2001-US23394 W

200107
25

<--

AB Polymerizable compns. comprise (a) a mixture of thio(meth)acrylate functional monomers comprising a first thio(meth)acrylate functional monomer, e.g., bis(thiomethacrylate)-1,2-ethylene, and a second thio(meth)acrylate functional monomer, which is chain extended; (b) an aromatic monomer having ≥2 vinyl groups, e.g., divinylbenzene; (c) a polythiol monomer having ≥2 thiol groups, e.g., pentaerythritol tetrakis(3-mercaptopropionate); and (d) a comonomer selected from (i) an anhydride monomer having ≥1 unsatd. group, e.g., methacrylic anhydride, (ii) a monomer having ≥3 (meth)acryloyl groups, e.g., pentaerythritol tetrakis(acrylate), and (iii) mixts. thereof. Polymers of the polymerizable compns. have a refractive index of ≥1.57 and an Abbe number of ≥33.

IT 496042-19-4P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

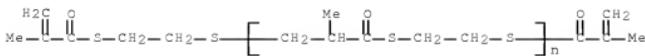
(high-refractive-index optical thio(meth)acrylate resin compns.)

RN 496042-19-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with
 2,2-bis[(3-mercaptopropanoate)methyl]-1,3-propanediyl
 bis(3-mercaptopropanoate), diethenylbenzene, S,S'-1,2-ethanediyl
 bis(2-methyl-2-propenethioate),
 $\alpha,\alpha'-(1\text{-methyl}1\text{-ethoxy}1\text{-lidene})di-4,1\text{-phenylene}bis[\alpha-$
 $[(2\text{-methyl}-1\text{-oxo}-2\text{-propenyl})oxy]poly(oxy-1,2-ethanediyl)]$ and
 $\alpha-(2\text{-methyl}-1\text{-oxo}-2\text{-propenyl})-\omega-[2-(2\text{-methyl}-1\text{-oxo}-2-$
 $propenyl)thio]ethyl]thio]poly[thio-1,2-ethanediyl]thio(2-methyl-1-oxo-
 1,3-propanediyl)] (9CI) (CA INDEX NAME)$

CM 1

CRN 393137-65-0
 CMF (C6 H10 O S2)n C10 H14 O2 S2
 CCI PMS



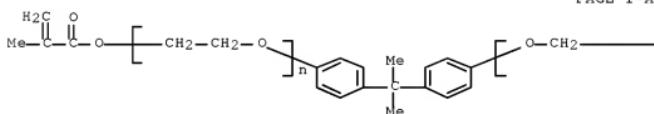
CM 2

CRN 117675-95-3
CMF C10 H14 O2 S2

CM 3

CRN 41637-38-1
CMF (C₂H₄O)_n C₂₃H₂₄O₄
CCI PMS

PAGE 1-A

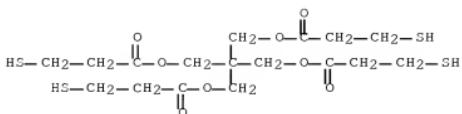


PAGE 1-B



CM 4

CRN 7575-23-7
CMF C17 H₂₈ O₈ S4



CM 5

CRN 1321-74-0
CMF C10 H10
CCI IDS



$$2 \left[\text{D1} - \text{CH} = \text{CH}_2 \right]$$

CM 6

CRN 760-93-0
CMF C8 H10 O3



IC ICM C08F228-02
ICS C08F220-38; C08F212-34; C08F222-10; C08F222-04; G02B001-04

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 73

IT 494863-89-7P 496042-19-4P
RL: IMF (Industrial manufacture); PRP (Properties); PREP

(Preparation)
(high-refractive-index optical thio(meth)acrylate resin compns.)
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS

REFERENCE COUNT: 5 RECORD (5 CITINGS)
THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT.

L28 ANSWER 2 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:117880 HCPLUS Full-text

DOCUMENT NUMBER: 138:154353

TITLE: High-refractive-index optical resin compositions
INVENTOR(S): Herold, Robert D.; Okoroafor, Michael O.; Smith,
Robert A.; Graham, Marvin J.

PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA

SOURCE: PCT Int. Appl., 49 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011925	A1	20030213	WO 2001-US23396	200107 25
				<--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001278007	A1	20030217	AU 2001-278007	200107 25
				<--
EP 1409562	A1	20040421	EP 2001-955959	200107 25
				<--
EP 1409562	B1	20060412		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004536933	T	20041209	JP 2003-517112	200107 25
				<--
PRIORITY APPLN. INFO.:			WO 2001-US23396	W
				200107 25
				<--

AB Polymerizable compns. comprise (a) a mixture of thio(meth)acrylate functional monomers comprising a first thio(meth)acrylate functional monomer, e.g., bis(thiomethacrylate)-1,2-ethylene, and a second thio(meth)acrylate functional monomer, which is chain extended; and (b) a radically polymerizable comonomer having ≥ 2 (meth)acryloyl groups selected from, for example, (i) ethoxyLATED bisphenol A dimethacrylate, (ii) polyethylene glycol dimethacrylate, (iii) trimethylolpropane trimethacrylate, and (iv) mixts. thereof. Polymers of the polymerizable compns. have a refractive index of ≥ 1.57 and an Abbe number of ≥ 33 .

IT 496045-26-2P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (high-refractive-index optical thio(meth)acrylate resin compns.)

RN 496045-26-2 HCPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-1,2-ethanediyl ester, polymer with $\alpha,\alpha'-(1\text{-methyl}ethylidene)\text{di-4,1-}$

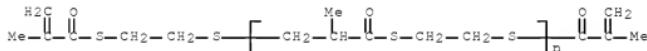
phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-[2-methyl-1-oxo-2-propenyl]thio)ethyl]thio]poly[thio-1,2-ethanediylthio(2-methyl-1-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 393137-65-0

CMF (C₆ H₁₀ O S₂)_n C₁₀ H₁₄ O₂ S₂

CCI PMS



CM 2

CRN 117675-95-3

CMF C₁₀ H₁₄ O₂ S₂

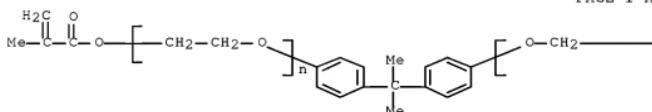
CM 3

CRN 41637-38-1

CMF (C₂ H₄ O)_n (C₂ H₄ O)_n C₂₃ H₂₄ O₄

CCI PMS

PAGE 1-A



PAGE 1-B



IC ICM C08F220-38

ICS C08L033-14; G02B001-04
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 73
 IT 496045-26-2P 496045-28-4P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP
 (Preparation)
 (high-refractive-index optical thio(meth)acrylate resin compns.)
 OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS
 RECORD (6 CITINGS)
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT

L28 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002185448 HCAPLUS Full-text
 DOCUMENT NUMBER: 136:254344
 TITLE: Synthetic resin lens and production method
 INVENTOR(S): Oshikiri, Tatsuya; Oyaizu, Yasushi; Uno, Kenji
 PATENT ASSIGNEE(S): Seed Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2002021165	A1	20020314	WO 2001-JP7641	200109 04
<--				
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002082201	A	20020322	JP 2000-271994	200009 07
<--				
JP 2003029004	A	20030129	JP 2001-213994	200107 13
<--				
JP 3739676	B2	20060125		
EP 1316820	A1	20030604	EP 2001-961345	200109 04
<--				
EP 1316820	B1	20080116		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
AT 384275	T	20080215	AT 2001-961345	200109 04
<--				
US 20030130461	A1	20030710	US 2002-296796	200211 26
<--				

September 4, 2009

10/553,488

32

US 6699953

B2

20040302

PRIORITY APPLN. INFO.:

JP 2000-271994

A

200009

07

<--

JP 2001-213994

A

200107

13

<--

WO 2001-JP7641

W

200109

04

<--

AB The invention refers to a synthetic resin lens comprising a copolymer with 20 - 80 weight% bis-2-methacryloyl thioethyl sulfide, CH₂:C(CH₃)COSCH₂SCH₂CH₂SCOC(CH₃):CH₂, 5 - 50 weight% thiol with at least 2 functional groups, 0 - 75 weight% monomer(s) copolymerizable with these and preferably further contains 5 - 50 weight% bifunctional (meth)acrylic compound, with a refractive index of 1.58 or higher, an Abbe's number of 35 or higher, and a sp. gr. of 1.35 or lower.

IT 219983-41-2

RL: DEV (Device component use); USES (Uses)

(lens made of synthetic resin and process for producing same)

RN 219983-41-2 HCPLUS

CN Propanoic acid, 3-mercaptop-,
 2,2-bis[(3-mercaptop-1-oxopropoxy)methyl]-1,3-propanediyl ester,
 polymer with α,α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-
 ethanediyl)] and S,S'-(thiodi-2,1-ethanediyl)
 bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 117651-91-9

CMF C12 H18 O2 S3



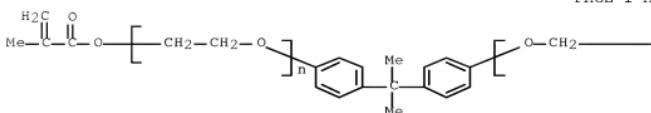
CM 2

CRN 41637-38-1

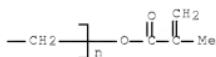
CMF (C₂H₄O)_n (C₂H₄O)_n C₂₃H₂₄O₄

CCI PMS

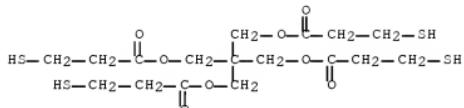
PAGE 1-A



PAGE 1-B



CM 3

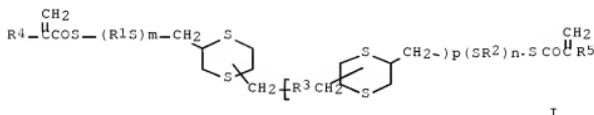
CRN 7575-23-7
CMF C17 H28 O8 S4

IC ICM G02B001-04
 ICS G02C007-02; C08F020-38
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 IT 219983-41-2 404013-05-4 404013-08-7 404013-10-1
 404013-12-3 404013-14-5 404013-16-7
 404013-18-9 404013-20-3 404013-22-5
 404013-24-7
 RL: DEV (Device component use); USES (Uses)
 (lens made of synthetic resin and process for producing same)
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L28 ANSWER 4 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:77473 HCPLUS Full-text
 DOCUMENT NUMBER: 136:135876
 TITLE: Polymerizable thio(meth)acrylates for optical materials
 INVENTOR(S): Hara, Tadashi; Mori, Yoshihiro
 PATENT ASSIGNEE(S): Tokuyama Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
JP 2002030082	A	20020129	JP 2000-218548	200007 19

PRIORITY APPLN. INFO.:

JP 2000-218548
<--200007
19
<--OTHER SOURCE(S): MARPAT 136:135876
GI

AB The compds. comprise I (R1, R2 = C2-4 alkylene, C6-12 arylene; R3 = S(R6S)q; R6 = C2-4 alkylene, C6-12 arylene, aromatic heterocycl, etc.; q = 0-4; R4, R5 = H, Me; p = 0-6; m, n = 0-6; if p = 0, then m, n ≠ 1, 2). Thus, a composition containing 2,5-bis[methacryloylthio-2-[2-(ethylthio)ethylthio]ethylthio]-1,4-dithiane was molded to give a test piece showing refractive index 1.646.

IT 391859-57-7P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerizable thio(meth)acrylates for optical materials)

RN 391859-57-7 HCPLUS

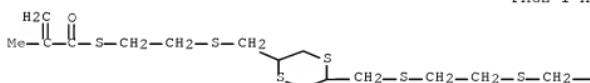
CN 2-Propenoic acid, 2-methyl-, oxiranyl methyl ester, polymer with S,S'-(2-ethanediylbis(thiomethylene-1,4-dithiane-5,2-diylmethylenethio-2,1-ethanediyl)] bis(2-methyl-2-propenethioate), ethenylbenzene and α,α'-(1-methylethylidene)di-4,1-phenylene[bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

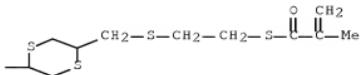
CRN 391859-36-2

CMF C26 H42 O2 S10

PAGE 1-A



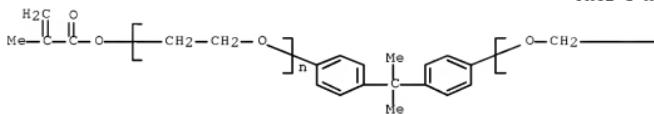
PAGE 1-B



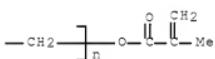
CM 2

CRN 41637-38-1
 CMF (C₂ H₄ O)_n (C₂ H₄ O)_n C₂₃ H₂₄ O₄
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 3

CRN 106-91-2
 CMF C₇ H₁₀ O₃



CM 4

CRN 100-42-5
 CMF C₈ H₈

H₂C=C=CH-Ph

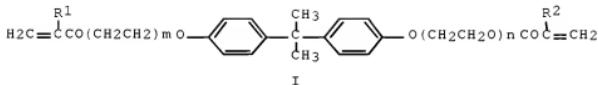
IC ICM C07D339-08
 ICS C08F20-38; C08F290-06; G02B001-04; G02C007-02
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 28, 35, 73
 IT 391859-49-7P 391859-50-0P 391859-51-1P 391859-52-2P
 391859-53-3P 391859-54-4P 391859-55-5P 391859-56-6P
 391859-57-7P 391859-58-8P 391859-59-9P 391859-60-2P
 391859-61-3P 391859-62-4P 391859-63-5P 391859-64-6P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polymerizable thio(meth)acrylates for optical materials)

L28 ANSWER 5 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999:64845 HCPLUS Full-text
 DOCUMENT NUMBER: 130:139782
 TITLE: Polymerizable compositions and optical lenses with high refractive index obtained from the compositions
 INVENTOR(S): Jiang, Peiqi; Menduni, Gilbert; Widawski, Gilles
 PATENT ASSIGNEE(S): Essilor International Compagnie Generale d'Optique, Japan
 SOURCE: PCT Int. Appl., 29 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9902575	A1	19990121	WO 1998-FR1429	199807 03 ---
FR 2765879	A1	19990115	FR 1997-8903	199707 11 ---
FR 2765879 AU 9884462	B1 A	20020607 19990208	AU 1998-84462	199807 03 ---
EP 994907	A1	20000426	EP 1998-935095	199807 03 ---
EP 994907 R: DE, FR, GB, JP 2001509522	B1 IT T	20020320 20010724	JP 2000-502091	199807 03 ---
JP 4187404 US 6635730	B2 B1	20081126 20031021	US 2000-481734	200001

PRIORITY APPLN. INFO.:	FR 1997-8903	A 199707 11
	<--	
	WO 1998-FR1429	W 199807 03
	<--	

GI



AB The invention concerns polymerizable compns. and optical lenses with high refractive index obtained from the compns., characterized in that they comprise as constituents base copolymerizable monomers at least 85 weight % of the total weight of copolymerizable monomers present in the composition: of a mixture M, for 100 parts by weight of the mixture; of (A) 20-80 parts of one or several, preferably only one, non-aromatic compds. comprising two thio(meth)acrylate functions, and (B) 80-20 parts of a compound I in which R1 and R2 represent, independently of each other, H or CH3 and m+n has a mean value from 0 to 20 inclusively, and 3-30 % by weight relative to the weight of mixture M of a polythiol; the composition containing less than 5% of other aromatic thio(meth)acrylate copolymerizable, cyclic or vinyl aromatic mono(meth)acrylate monomers. The invention is applicable to the manufacture of spectacle lenses.

IT 219983-39-8P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymerizable compns. and optical lenses with high refractive index obtained from the compns.)

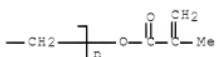
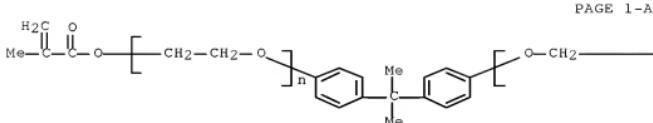
RN 219983-39-8 HCPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester, polymer with 1,2-ethanediyl bis(mercaptopoacetate) and $\alpha,\alpha'-(1\text{-methylethylidene})\text{di-4,1-phenylene]bis[}\omega\text{-}[(2\text{-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)]}$ (9CI) (CA INDEX NAME)

CM 1**CRN** 117651-91-9**CMF** C12 H18 O2 S3

CM 2

CRN 41637-38-1
 CMF (C₂ H₄ O)_n (C₂ H₄ O)_n C₂₃ H₂₄ O₄
 CCI PMS



CM 3

CRN 123-81-9
 CMF C₆ H₁₀ O₄ S₂



IC ICM C08F222-10
 ICS G02B001-04
 CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 63
 IT 219983-39-8P 219983-40-1P
 219983-41-2P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polymerizable compns. and optical lenses with high refractive index obtained from the compns.)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 6 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1998:394321 HCPLUS Full-text
 DOCUMENT NUMBER: 129:68407
 ORIGINAL REFERENCE NO.: 129:14199a,14202a
 TITLE: Manufacture of acrylic thio monomers for crosslinkable compositions in production of

INVENTOR(S): castings for ophthalmic lenses
 Toh, Huan Kiak; Chen, Fang; Kok, Chong Meng
 Sola International Holdings Ltd., Australia;
 SOURCE: Toh, Huan Kiak; Chen, Fang; Kok, Chong Meng
 PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
WO 9824761	A1	19980611	WO 1997-AU816	199712 03
<--				
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9851108	A	19980629	AU 1998-51108	199712 03
<--				
US 6172140	B1	20010109	US 1999-308931	199907 27
<--				
PRIORITY APPLN. INFO.:			AU 1996-3958	A 199612 03
<--				
			WO 1997-AU816	W 199712 03
<--				

AB A crosslinkable polymeric casting composition contained
 $\text{CH}_2:\text{CR}4\text{COSMpcHR1CHR2M1pSCOCR4:CH}_2$ [I; M, M1 = O(CO)m(CHR3)n or S(CO)m(CHR3)n;
 R1, R2 = H, (substituted) C1-10 alkyl, (substituted) C1-10 alkoxy, or
 CHR3SCOCR4:CH_2 ; R3, R4 = H, (substituted) C1-10 alkyl, or (substituted) C1-10
 alkoxy; m, p = 0 or 1; n = 0-3] and optionally another polymerizable monomer.
 This casting composition produces moldings with high n and rigidity, very low
 d., and good mech. properties and color for lenses. A typical I was
 manufactured by esterification of 4-mercaptopethyl-3,6-dithia-1,8-
 octanedithiol with methacrylic anhydride in Me tert-Bu ether-aqueous NaOH
 mixture in the presence of BHT.

IT 209068-37-1P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP
 (Properties); PREP (Preparation); USES (Uses)
 (manufacture of acrylic thio monomers for crosslinkable compns. in
 production of castings for ophthalmic lenses)

RN 209068-37-1 HCPLUS

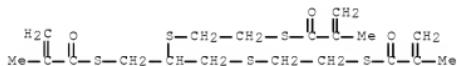
CN 11,14-Dioxa-2,9-diazahedtadec-16-enoic acid,

16-methyl-10,15-dioxo-12-[(1-oxo-2-propenyl)oxy]methyl]-, 1-[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-2-[(1-oxo-2-propenyl)oxy]ethyl ester, polymer with α,ω' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], S,S' -[(1-[(2-methyl-1-oxo-2-propenyl)thio]methyl)-1,2-ethanediyl]bis(thio-2,1-ethanediyl)] bis(2-methyl-2-propenethioate) and (octahydro-4,7-methano-1H-indene-5,7-diyl)bis(methylene) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 185814-24-8

CMF C19 H28 O3 S5



CM 2

CRN 91105-84-9

CMF C28 H40 N2 O12

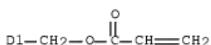
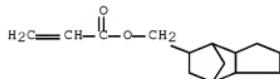
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 42594-17-2

CMF C18 H24 O4

CCI IDS



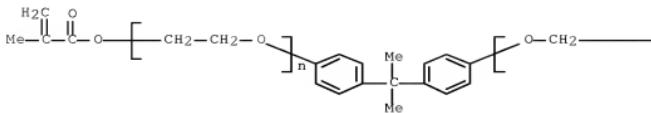
CM 4

CRN 41637-38-1

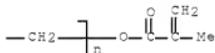
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4

CCI PMS

PAGE 1-A



PAGE 1-B



IC ICM C07C327-22

ICS C07C327-28; C08F020-38; C08F022-24; C08F028-02; C08F120-38;
C08F122-24; C08F220-38; C08F222-24; C08F228-02; G02B001-04

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 63

IT 209068-35-9P 209068-36-0P 209068-37-1P
209068-38-2P 209068-39-3P 209068-40-6PRL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)
(manufacture of acrylic thio monomers for crosslinkable compns. in production of castings for ophthalmic lenses)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 7 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:41868 HCPLUS Full-text

DOCUMENT NUMBER: 126:60509

ORIGINAL REFERENCE NO.: 126:11883a,11886a

TITLE: Thio(meth)acrylate blends giving polymers having low yellowness index useful in ophthalmic lenses

INVENTOR(S): Keita, Gabriel; Jiang, Peiqi

PATENT ASSIGNEE(S): Essilor International (Compagnie Generale D'optique), Fr.

SOURCE: Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
EP 745620	A1	19961204	EP 1996-401064	199605 15
EP 745620	B1	19971029		<--

R: DE, ES, FR, GB, IT					
FR 2734827	A1	19961206	FR 1995-6442	199505	31
				<--	
FR 2734827	B1	19970711		199605	
ES 2112666	T3	19980401	ES 1996-401064	15	
				<--	
US 5741831	A	19980421	US 1996-652244	199605	23
				<--	
JP 08325337	A	19961210	JP 1996-133390	199605	28
				<--	
JP 3682117	B2	20050810		199605	
AU 9654562	A	19961212	AU 1996-54562	29	
				<--	
AU 704328	B2	19990422			
PRIORITY APPLN. INFO.:			FR 1995-6442	A	
				199505	31
				<--	

AB The title monomer blends contain thio(meth)acrylates ≥ 10 , comonomers [preferably vinyl monomers or (met)acrylates] 0-90, and unsatd. alcs. (with non-aromatic unsatn.) 0.1-15%. A mixture of 4,4'-thiodibenzothiol dimethacrylate 20, ethoxylated (d.p. 2.6) bisphenol A dimethacrylate 40, benzyl methacrylate 10, 2-[{(tribromobenzyl)oxy}ethyl acrylate 10, polytetramethylene glycol dimethacrylate 20, and 3-methyl-2-butene-1-ol 2 parts containing 0.105% photoinitiators was polymerized by UV to give lenses which, after 2 h at 110°, had thickness 1.4 mm and yellowness index 2.98 and 2.85, resp., before and after thermal curing.

IT 185214-67-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thio(meth)acrylate blends giving polymers having low yellowness index useful in ophthalmic lenses)

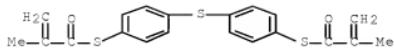
RN 185214-67-9 HCPLUS

CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with 3-methyl-2-butene-1-ol, α,α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxylpoly(oxy-1,4-butanediyl), S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) and 2-(tribromophenoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3

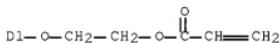


CM 2

CRN 54363-46-1
 CMF C11 H9 Br3 O3
 CCI IDS



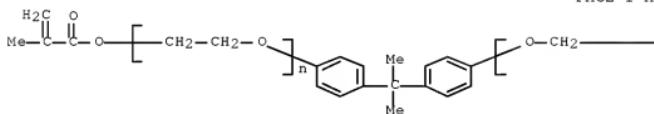
3 (D1-Br)



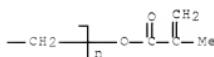
CM 3

CRN 41637-38-1
 CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 4

CRN 28883-57-0
 CMF (C4 H8 O)n C8 H10 O3

CCI PMS



CM 5

CRN 2495-37-6
CMF C11 H12 O2

CM 6

CRN 556-82-1
CMF C5 H10 OIC ICM C08F228-02
ICS G02B001-04

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 63

IT 185214-67-9P 185214-68-0P

185214-69-1P 185214-70-4P 185214-71-5P

185214-72-6P 185214-73-7P 185214-74-8P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thio(meth)acrylate blends giving polymers having low yellowness index useful in ophthalmic lenses)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L28 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:410496 HCAPLUS Full-text

DOCUMENT NUMBER: 125:60521

ORIGINAL REFERENCE NO.: 125:11623a,11626a

TITLE: Actinic radiation-curable composition and lens sheet

INVENTOR(S): Fukushima, Hiroshi; Hamada, Masao; Oishi, Noriji; Konami, Yukichi

PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

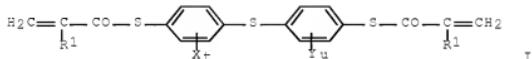
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9611964	A1	19960425	WO 1995-JP2128	199510 17
			<--	
W: KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 08113614	A	19960507	JP 1994-277151	199410 18
			<--	
JP 08113615	A	19960507	JP 1994-277153	199410 18
			<--	
JP 08113616	A	19960507	JP 1994-277154	199410 18
			<--	
EP 735062	A1	19961002	EP 1995-934319	199510 17
			<--	
EP 735062	B1	20020130		
R: DE, FR, GB				
EP 952466	A2	19991027	EP 1999-113508	199510 17
			<--	
EP 952466	A3	20000503		
R: DE, FR, GB				
US 5969867	A	19991019	US 1996-652464	199606 14
			<--	
US 6206550	B1	20010327	US 1999-253695	199902 22
			<--	
PRIORITY APPLN. INFO.:			JP 1994-277151	A
				199410 18
			<--	
			JP 1994-277153	A
				199410 18
			<--	
			JP 1994-277154	A
				199410 18
			<--	
			EP 1995-934319	A3
				199510 17

<--
WO 1995-JP2128W
199510
17

<--

GI



AB The composition contains (A) 20-80 parts I (R1 = H, Me; X, Y = Me, Cl, Br, I; t, u = 0-2), (B) 20-80 parts ≥ 1 compound having ≥ 1 (meth)acryloyl group in its mol., or a mixture of (B-1) 10-90 parts ≥ 1 compound having ≥ 2 (meth)acryloyl groups in its mol., and (B-2) 1-90 parts mono-(meth)acrylate compound, and (C) 0.01-5 parts an actinic radiation-sensitive free radical polymerization initiator per 100 parts in total of the components A and B or the components A, B-1 and B-2. The lens sheet, which is useful in liquid crystal displaying devices and photog. applications, comprises a transparent substrate and, formed on at least either side thereof, a lens part prepared from the composition

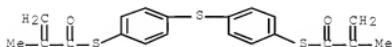
IT 178436-10-7P

RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(actinic radiation-curable composition and lens sheet)

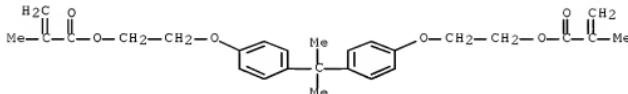
RN 178436-10-7 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester,
polymer with 2-phenoxyethyl 2-propenoate and
S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
(CA INDEX NAME)

CM 1**CRN** 129283-82-5**CMF** C20 H18 O2 S3**CM** 2**CRN** 48145-04-6**CMF** C11 H12 O3



CM 3

CRN 24448-20-2
CMF C27 H32 O6

IC ICM C08F220-12
 ICS C08F220-20; C08F220-38; C08F246-00; C08F290-06; G02B001-04;
 G02B003-00; G02B005-04; G02F001-1335

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 75

IT 178436-10-7P 178436-11-8P
 178436-12-9P 178436-13-0P 178436-14-1P
 178436-15-2P 178436-16-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (actinic radiation-curable composition and lens sheet)

OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (29 CITINGS)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 9 OF 11 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:462860 HCPLUS Full-text

DOCUMENT NUMBER: 123:113944

ORIGINAL REFERENCE NO.: 123:20341a,20344a

TITLE: Acrylic moldings for eyeglass lenses

INVENTOR(S): Honda, Tomoji; Kaetsu, Isao

PATENT ASSIGNEE(S): Tokyo Keikaku KK, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 07018041	A	19950120	JP 1993-183418	199306

JP 3418427

B2 20030623

PRIORITY APPLN. INFO.:

JP 1993-183418

199306

30

<--

AB The title moldings with $n \geq 1.58$ and dyeability are obtained by radically casting polymerization of 4,4'-thiobisbenzenethiol dimethacrylate (I) 10-40, $\text{CH}_2\text{C}(\text{:O})(\text{OCH}_2\text{CH}_2)_n\text{O}-1,4-\text{C}_6\text{H}_4\text{CMe}_2-1,4-\text{C}_6\text{H}_4\text{O}(\text{CH}_2\text{CH}_2\text{O})_n\text{C}(\text{:O})\text{CX:CH}_2$ (II; X = H, Me; n = 3-6) 10-30, and comonomers 30-80 parts. Thus, I 20, II (X = Me, average n = 5) 12, 2,2'-bis[4-[2-(2-methacryloyloxyethoxy)ethoxy]phenyl]propane 40, and α -methylstyrene 28 parts were mixed with 1.5 parts lauryl peroxide and casting polymerized to give a test piece with light transmittance 90% and n 1.592.

IT 166440-67-1P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
 (casting-prepared acrylic polymers with good transparency and dyeability for eyeglass lenses)

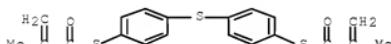
RN 166440-67-1 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
 (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyoxy-2,1-ethanediyl) ester, polymer with (1-methylethenyl)benzene,
 $\alpha,\omega'-(1\text{-methylethylidene})di-4,1\text{-phenylene}]\text{bis}(\omega-$
 $[(2\text{-methyl-1-oxo-2-propenyl)oxy}]\text{poly}(\text{oxy-1,2-ethanediyl}))$ and
 $S,S'-(\text{thiodi-4,1-phenylene})\text{ bis}(2\text{-methyl-2-propenethioate})$ (9CI)
 (CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3

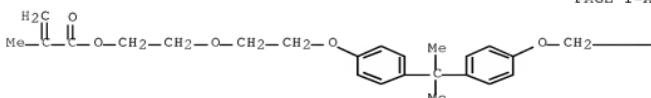


CM 2

CRN 56744-60-6

CMF C31 H40 O8

PAGE 1-A



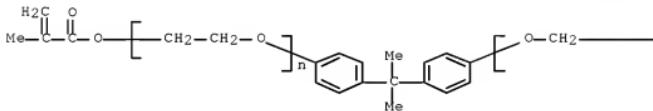
PAGE 1-B



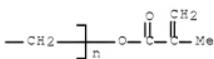
CM 3

CRN 41637-38-1
 CMF (C₂H₄O)_n (C₂H₄O)_n C₂₃H₂₄O₄
 CCI PMS

PAGE 1-A



PAGE 1-B



CM 4

CRN 98-83-9
 CMF C₉H₁₀



IC ICM C08F299-02

ICS C08F220-30; C08F220-38; G02C007-02

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

IT 166440-67-1P 166440-68-2P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP

(Preparation); USES (Uses)

(casting-prepared acrylic polymers with good transparency and
dyeability for eyeglass lenses)

L28 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:702212 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 121:302212

ORIGINAL REFERENCE NO.: 121:55317a,55320a

TITLE: Crosslinkable fluorene di(meth)acrylate

INVENTOR(S): Kok, Chong Meng; Toh, Huan Kiak
 PATENT ASSIGNEE(S): Sola International Holdings, Ltd., Australia
 SOURCE: Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

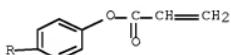
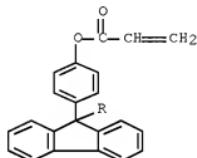
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 598552	A2	19940525	EP 1993-308983	199311 10
EP 598552	B1	19990602		<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CA 2102378	A1	19940517	CA 1993-2102378	199311 03
AU 9350581	A	19940526	AU 1993-50581	199311 10
AU 665124	B2	19951214		<--
JP 07002939	A	19950106	JP 1993-285156	199311 15
JP 3170122	B2	20010528		<--
US 5502139	A	19960326	US 1995-426480	199504 20
PRIORITY APPLN. INFO.:			AU 1992-5864	A 199211 16
			US 1993-151820	A1 199311 15
				<--

- AB The title polymers, useful for video disks, ophthalmic lenses, are prepared from fluorene di(meth)acrylate and a comonomer including a polymerizable double bond. Thus, a mixture of polyethylene glycol dimethacrylate 45, ethoxylated trimethylpropane triacrylate 35, urethane tetraacrylate 15, and bisphenolfluorene dihydroxyacrylate 5% was cured in a mold by UV radiation to give a plate.
- IT 159224-59-6
- RL: USES (Uses)
 (crosslinkable, for video disks and ophthalmic lenses)
- RN 159224-59-6 HCPLUS
- CN 2-Propenoic acid, 9H-fluoren-9-ylidenedi-4,1-phenylene ester, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxyl]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), α,α' -[(1-methylethylidene)di-4,1-

phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxylpoly(oxy-1,2-ethanediyl) and S,S' -(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

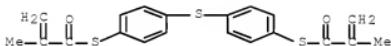
CM 1

CRN 159224-55-2
CMF C31 H22 O4



CM 2

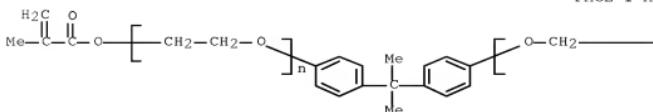
CRN 129283-82-5
CMF C20 H18 O2 S3



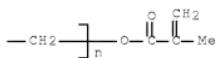
CM 3

CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A



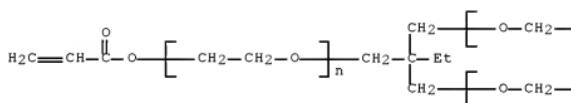
PAGE 1-B



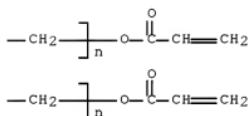
CM 4

CRN 28961-43-5
 CMF $(\text{C}_2\text{ H}_4\text{ O})_n (\text{C}_2\text{ H}_4\text{ O})_n (\text{C}_2\text{ H}_4\text{ O})_n$ C15 H20 O6
 CCI PMS

PAGE 1-A

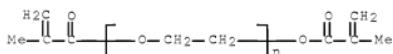


PAGE 1-B



CM 5

CRN 25852-47-5
 CMF $(\text{C}_2\text{ H}_4\text{ O})_n$ C8 H10 O3
 CCI PMS



IC ICM G02B001-04
 ICS C08F220-26; C08F220-20; C08G075-02
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 63, 73
 IT 140714-78-9 159224-56-3 159224-57-4 159224-58-5
 159224-59-6

RL: USES (Uses)

(crosslinkable, for video disks and ophthalmic lenses)

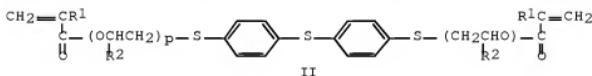
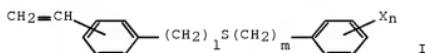
OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L28 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1994:567079 HCAPLUS Full-text
 DOCUMENT NUMBER: 121:167079
 ORIGINAL REFERENCE NO.: 121:30097a,30100a
 TITLE: Composition for optical materials
 INVENTOR(S): Nakajima, Hiromitsu; Miyazaki, Takeshi; Koinuma, Yasuyoshi; Matsumoto, Takeo
 PATENT ASSIGNEE(S): Nippon Oils & Fats Co Ltd, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 05303003	A	19931116	JP 1992-110010	199204 28

PRIORITY APPLN. INFO.: JP 1992-110010
 <--
 199204
 28

OTHER SOURCE(S): MARPAT 121:167079
 GI



AB The title composition contains the organic S compds. I and II [X = halo, Me; l = 1,2; m,n = 0,1; R1 and R2 = H, Me; p,q = 0-5]. Optical materials of n ≥ 1.55 are obtained by polymerization hardening the above compns.

IT 157411-25-1

RL: USES (Uses)

(optical material, for lenses and other optical use)

RN 157411-25-1 HCAPLUS

CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-4,1-phenylene) ester, polymer with chloro[[(ethenylphenyl)methyl]thio]benzene and α,α'-(1-methylethylidene)di-4,1-phenylene]bis[ω-

[(2-methyl-1-oxo-2-propenyl)oxylpoly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 157411-24-0
CMF C15 H13 Cl S
CCl IDS



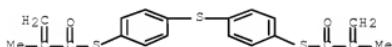
1/2 [D1—CH=CH₂]

1/2 (D1—Cl)

1/2 [D1—CH₂—S—D1]

CM 2

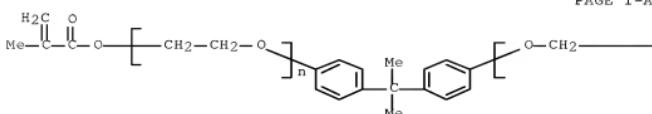
CRN 129283-82-5
CMF C20 H18 O2 S3



CM 3

CRN 41637-38-1
CMF (C₂H₄O)_n (C₂H₄O)_n C₂₃H₂₄O₄
CCl PMS

PAGE 1-A



PAGE 1-B



IC ICM G02B001-04
 ICS C08F212-14; C08F220-38; C08F299-02
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 73
 IT 157411-25-1 157411-40-0 157411-41-1 157411-42-2
 157479-28-2 157479-29-3 157479-30-6 157479-31-7
 157479-32-8 157479-33-9 157479-34-0
 157479-35-1 157479-36-2
 RL: USES (Uses)
 (optical material, for lenses and other optical use)

=> d ibib abs hitstr hitind l30 1-16

L30 ANSWER 1 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:876814 HCPLUS Full-text
 DOCUMENT NUMBER: 141:357814
 TITLE: Polymer waveguides with excellent heat resistance and reduced optical anisotropy and optical loss and their manufacture
 INVENTOR(S): Kondo, Naoyuki; Doi, Naoko; Hayashi, Takao
 PATENT ASSIGNEE(S): Matsushita Electric Works, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2004294720	A	20041021	JP 2003-86376	200303 26
<--				
PRIORITY APPLN. INFO.:		JP 2003-86376		
		200303 26		
<--				

AB The waveguides, useful for optical communication, are manufactured by applying core materials on clad substrates (having grooves corresponding to core patterns) under conditions where the substrates and/or materials are heated, wherein the substrates are made from aromatic group-containing thermoplastic resins and the materials contain ≥ 1 (meth)acrylates bearing radically polymerizable double bonds and diacrylates
 $\text{CH}_2:\text{CR1:O}(\text{OC}_2\text{H}_4)_n\text{OQO}(\text{C}_2\text{H}_4)_m\text{C:CR1:CH}_2$ (Q = divalent 9,9-diphenylfluorene; R1 = H, Me; n, m = 1-10).
 IT 776303-33-4P 776303-35-6P
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(cardo, core; waveguides consisting of aromatic thermoplastic resin clads and fluorene-containing acrylic polymer cores with good heat resistance and reduced shrinkage, optical anisotropy, and optical loss)

RN 776303-33-4 HCPLUS

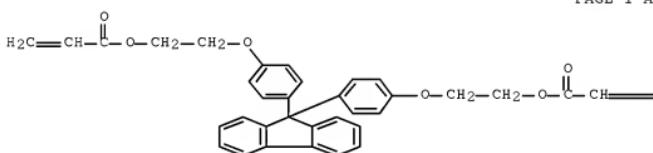
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-ethanediyl) di-2-propenoate and S,S'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 161182-73-6

CMF C35 H30 O6

PAGE 1-A



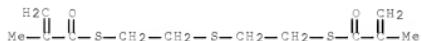
PAGE 1-B

$\equiv \text{CH}_2$

CM 2

CRN 117651-91-9

CMF C12 H18 O2 S3



CM 3

CRN 97-90-5

CMF C10 H14 O4



RN 776303-35-6 HCAPLUS

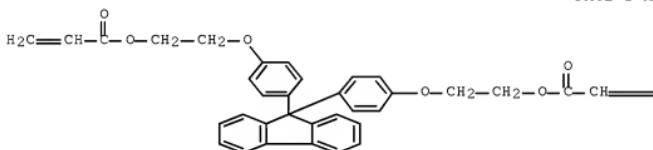
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with
9H-fluoren-9-ylidenebis(4,1-phenyleneoxy-2,1-ethanediyl)
di-2-propenoate and S-phenyl 2-methyl-2-propenethioate (9CI) (CA
INDEX NAME)

CM 1

CRN 161182-73-6

CMF C35 H30 06

PAGE 1-A



PAGE 1-B

$$\equiv \text{CH}_2$$

CM 2

CRN 54667-28-6

CMF C10 H10 S



CM 3

CRN 97-90-5

CMF C10 H14 O4



IC ICM G02B006-13

ICS G02B006-12

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38

IT Polymerization catalysts

(photopolymn., for core; waveguides consisting of aromatic thermoplastic resin clads and fluorene-containing acrylic polymer cores with good heat resistance and reduced shrinkage, optical anisotropy, and optical loss)

IT 776303-30-1P 776303-31-2P 776303-32-3P 776303-33-4P

776303-35-6P 776307-42-7P 776307-43-8P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(cardo, core; waveguides consisting of aromatic thermoplastic resin clads and fluorene-containing acrylic polymer cores with good heat resistance and reduced shrinkage, optical anisotropy, and optical loss)

IT 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 119313-12-1,
2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)butanone

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. initiator for core; waveguides consisting of aromatic thermoplastic resin clads and fluorene-containing acrylic polymer cores with good heat resistance and reduced shrinkage, optical anisotropy, and optical loss)

L30 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:101202 HCAPLUS Full-text

DOCUMENT NUMBER: 140:147010

TITLE: Photopolymerizable compositions and uses thereof

INVENTOR(S): Imai, Masao; Nakamura, Mitsuo; Naruse, Hiroshi; Kogo, Osamu; Enna, Masahiro; Otsuji, Atsuo

PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan

SOURCE: PCT Int. Appl., 40 pp.

DOCUMENT TYPE: CODEN: PIXXD2

LANGUAGE: Patent

FAMILY ACC. NUM. COUNT: 1 Japanese

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

WO 2004011511 A1 20040205 WO 2003-JP9065

200307

17

<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
 MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
 SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
 ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG

AU 2003281687 A1 20040216 AU 2003-281687

200307
17

JP 2004128468 A 20040422 JP 2003-198228

200307
17

EP 1548039 A1 20050629 EP 2003-741440

200307
17

EP 1548039 B1 20080813

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
 SK

CN 1671758 A 20050921 CN 2003-818271

200307
17

CN 1296399 C 20070124

JP 4164493 B2 20081015 JP 2004-524112

200307
17

US 20060003261 A1 20060105 US 2005-522532

200501
27

US 7307107 B2 20071211

JP 2002-219573

A
200207
29

JP 2003-119417

A
200304
24

WO 2003-JP9065

W
200307
17

<--

AB Photopolymerizable compns., which can be polymerized in a short period of time and are useful for optical applications, comprise a photopolymer, initiator and a polymerizable compound component, characterized in that the polymerizable compound component includes (a) a bifunctional (meth)acrylic (thio)ester containing a sulfur atom in the mol. and (b) a bifunctional (meth)acrylic ester having a urethane linkage and/or a (meth)acrylate H₂C:(R1)Y1OC6H3(R3)mX1C6H3(R4)nOY2COCR2:CH2 [R1, R2 = H, Me; R3, R4 = alkyl, aralkyl, aryl, halo; m, n = 0-2; X1 = C1-3 alkylidene; and Y1, Y2 = polyoxyalkylene with the proviso that at least one of Y1 and Y2 is hydroxylated poly(oxyalkylene)].

IT 653577-57-2P 653577-63-0P

653577-64-1P 653577-67-4P 653577-71-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered)

material use); PREP (Preparation); USES (Uses)
(manufacture of photopolymerizable compns. and uses thereof)

RN 653577-57-2 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
ester, polymer with S,S'-(thiodi-2,1-ethanediyl) di-2-propenethioate
(9CI) (CA INDEX NAME)

CM 1

CRN 119380-53-9

CMF C10 H14 O2 S3

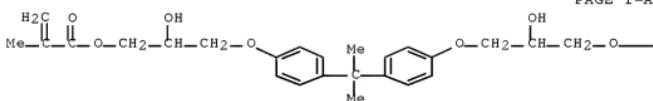


CM 2

CRN 1565-94-2

CMF C29 H36 O8

PAGE 1-A



PAGE 1-B



RN 653577-63-0 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
ester, polymer with S,S'-(thiodi-2,1-ethanediyl) di-2-propenethioate
and 2-[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-
propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]
oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

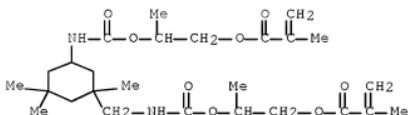
CRN 119380-53-9

CMF C10 H14 O2 S3



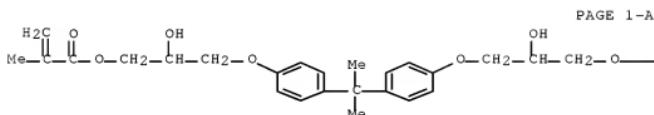
CM 2

CRN 76701-94-5
 CMF C26 H42 N2 O8



CM 3

CRN 1565-94-2
 CMF C29 H36 O8



PAGE 1-A



PAGE 1-B

RN 653577-64-1 HCPLUS
 CN 2-Propenoic acid, 2-methyl-,
 (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
 ester, polymer with 2,2'-thiobis[ethanethiol] and
 S,S'-(thiodi-2,1-ethanediyl) di-2-propenethioate (9CI) (CA INDEX
 NAME)

CM 1

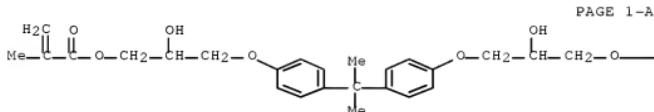
CRN 119380-53-9
 CMF C10 H14 O2 S3



CM 2

CRN 3570-55-6
CMF C4 H10 S3

CM 3

CRN 1565-94-2
CMF C29 H36 O8

PAGE 1-B

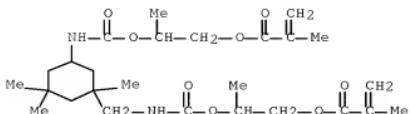
RN 653577-67-4 HCPLUS
 CN 2-Propenoic acid, 2-methyl-,
 (1-methylprop-1-enylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
 ester, polymer with 2,2'-thiobis[ethanethiol],
 S,S'-(thiodi-2,1-ethanediyl) di-2-propenethioate and
 2-[[[[1,3,3-trimethyl-5-[(1-methyl-2-[(2-methyl-1-oxo-2-
 propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]
 oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 119380-53-9
CMF C10 H14 O2 S3

CM 2

CRN 76701-94-5
CMF C26 H42 N2 O8



CM 3

CRN 3570-55-6

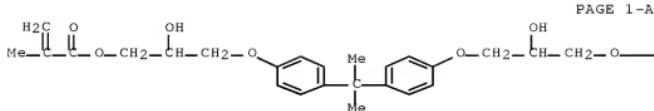
CMF C4 H10 S3



CM 4

CRN 1565-94-2

CMF C29 H36 O8



PAGE 1-B



RN 653577-71-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-,
 (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
 ester, polymer with oxybis(2,1-ethanediyl)oxy-2,1-ethanediyl
 bis(2-methyl-2-propenoate) and S,S'-(thiodi-2,1-ethanediyl)
 di-2-propenethioate (9CI) (CA INDEX NAME)

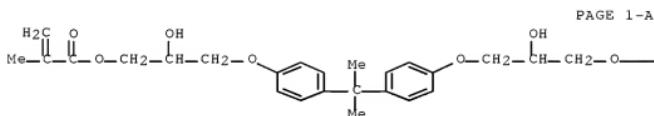
CM 1

CRN 119380-53-9

CMF C10 H14 O2 S3



CM 2

CRN 1565-94-2
CMF C29 H36 O8

PAGE 1-B

CM 3

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-B

—Me

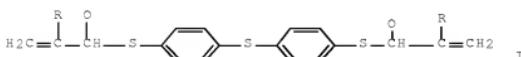
IC ICM C08F220-30
 ICS C08F220-36; C08F220-38; G02B001-04; H01L023-29
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38, 73, 76
 ST bifunctional methacrylic thioester photopolymerizable compn; methacrylic ester urethane bifunctional photopolymerizable compn
 IT Electroluminescent devices
 Lenses
 Transparent materials
 (manufacture of photopolymerizable compns. and uses thereof)

IT 76701-94-5P 119380-53-9P 155650-05-8P 653577-69-6P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP
 (Preparation); RACT (Reactant or reagent)
 (manufacture of photopolymerizable compns. and uses thereof)
 IT 653577-57-2P 653577-59-4P 653577-61-8P
 653577-63-0P 653577-64-1P 653577-66-3P
 653577-67-4P 653577-71-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (manufacture of photopolymerizable compns. and uses thereof)
 IT 625-36-5, 3-Chloropropionic acid chloride 868-77-9, 2-Hydroxyethyl
 methacrylate 923-26-2, 2-Hydroxypropyl methacrylate 3570-55-6,
 Bis(2-mercaptoethyl) sulfide 3634-83-1, m-Xylylene diisocyanate
 4098-71-9, Isophorone diisocyanate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manufacture of photopolymerizable compns. and uses thereof)
 IT 7473-98-5 75980-60-8, Diphenyl(2,4,6-trimethylbenzoyl)
 phosphineoxide
 RL: CAT (Catalyst use); USES (Uses)
 (photoinitiators; manufacture of photopolymerizable compns.
 and uses thereof)
 OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
 RECORD (5 CITINGS)
 REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

L30 ANSWER 3 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:902605 HCPLUS [Full-text](#)
 DOCUMENT NUMBER: 139:401339
 TITLE: Lens and polymer composite material for lens
 INVENTOR(S): Chikaoka, Satoyuki; Takahashi, Toshiyuki
 PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003329801	A	20031119	JP 2002-134978	200205 10
<--				
PRIORITY APPLN. INFO.: JP 2002-134978				200205 10

GI



AB The invention refers to a composite material containing a radical organic monomer I [R = H, methyl], a (meth)acrylate monomer containing 3 or more (meth)acryl groups, and a photosensitive radical polymerization initiator for lenses for high n and good scratch resistance.

IT 399510-23-7 625394-86-7 625394-87-8
625394-88-9 625394-89-0

RL: DEV (Device component use); USES (Uses)
(lens and polymercomposite material for lens)

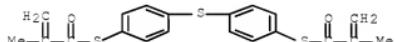
RN 399510-23-7 HCPLUS

CN 2-Propenoic acid, 2-[{3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[(1-oxo-2-propenyl)oxy]methyl-1,3-propanediyl ester, polymer with S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
(CA INDEX NAME)

CM 1

CRN 129283-82-5

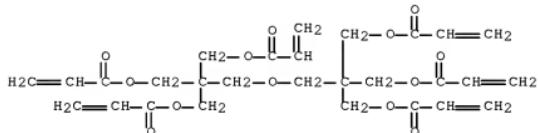
CMF C20 H18 O2 S3



CM 2

CRN 29570-58-9

CMF C28 H34 O13



RN 625394-86-7 HCPLUS

CN Hexanoic acid, 2,6-diisocyanato-, 2-isocyanatoethyl ester, polymer with 2-[{3-hydroxy-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[(1-oxo-2-propenyl)oxy]methyl-1,3-propanediyl di-2-propenoate and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
(CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3



CM 2

CRN 69878-18-8

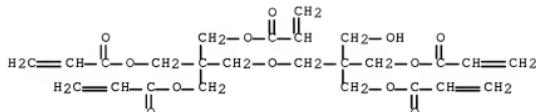
CMF C11 H13 N3 O5



CM 3

CRN 60506-81-2

CMF C25 H32 O12



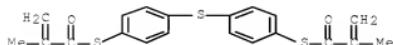
RN 625394-87-8 HCPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid,
 7-Oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with
 2-[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-
 propenyl)oxy]methyl]propoxy]methyl]-2-[(1-oxo-2-
 propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and
 S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
 (CA INDEX NAME)

CM 1

CRN 129283-82-5

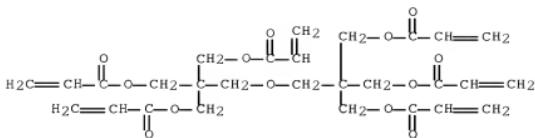
CMF C20 H18 O2 S3



CM 2

CRN 29570-58-9

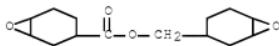
CMF C28 H34 O13



CM 3

CRN 2386-87-0

CMF C14 H20 O4



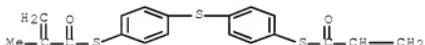
RN 625394-88-9 HCPLUS

CN Hexanoic acid, 2,6-diisocyanato-, 2-isocyanatoethyl ester, polymer with 2-[{3-hydroxy-2,2-bis[{{(1-oxo-2-propenyl)oxy}methyl}propoxy]methyl}-2-{[(1-oxo-2-propenyl)oxy]methyl}-1,3-propanediyl di-2-propenoate and S-[4-[[4-[(1-oxo-2-propenyl)thio]phenyl]thiolphenyl]-2-methyl-2-propenethioate (9CI) (CA INDEX NAME)

CM 1

CRN 625111-18-4

CMF C19 H16 O2 S3



CM 2

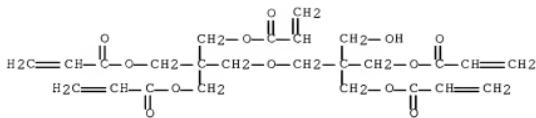
CRN 69878-18-8

CMF C11 H13 N3 O5



CM 3

CRN 60506-81-2
 CMF C25 H32 O12

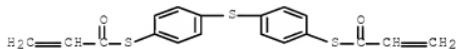


RN 625394-89-0 HCPLUS

CN Hexanoic acid, 2,6-diisocyanato-, 2-isocyanatoethyl ester, polymer with 2-[3-hydroxy-2,2-bis[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and S,S'-(thiodi-4,1-phenylene) di-2-propenethioate (9CI) (CA INDEX NAME)

CM 1

CRN 137052-23-4
 CMF C18 H14 O2 S3



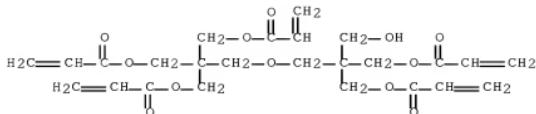
CM 2

CRN 69878-18-8
 CMF C11 H13 N3 O5



CM 3

CRN 60506-81-2
 CMF C25 H32 O12



IC ICM G02B001-04

ICS C08F002-46; C08F220-38; C08F290-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 399510-23-7 625394-86-7 625394-87-8

625394-88-9 625394-89-0

RL: DEV (Device component use); USES (Uses)
(lens and polymercomposite material for lens)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L30 ANSWER 4 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 20031818153 HCPLUS Full-text

DOCUMENT NUMBER: 139:324207

TITLE: Enic compounds, sulfur-containing polyenic compound, sulfur-containing polythiol compound, high refractive index photocurable composition, and cured product

INVENTOR(S): Ishii, Kenji; Okazaki, Hitoshi; Kondo, Mitsuteru; Takasaki, Masaaki; Takeuchi, Motoharu

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 43 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 20030195270	A1	20031016	US 2003-359271	200302 06
			<--	
US 6872333	B2	20050329		
JP 2003226718	A	20030812	JP 2002-30616	200202 07
			<--	
JP 4126918	B2	20080730		
JP 2004137421	A	20040513	JP 2002-305532	200210 21
			<--	
JP 4235795	B2	20090311		
JP 2004182686	A	20040702	JP 2002-354195	200212 05
			<--	

September 4, 2009

10/553,488

71

JP 4321055	B2	20090826	
US 20050154073	A1	20050714	US 2004-997

200412
02

<--

US 7026372	B2	20060411	JP 2002-30616	A
PRIORITY APPLN. INFO.:				200202 07

<--
JP 2002-305532

A
200210
21

<--
JP 2002-354195

A
200212
05

<--
US 2003-359271

A3
200302
06

<--

AB A composition containing 3,3'-thiobis(propane-1,2-dithiol) or other polythiol and ≥1 enic compds. is photocurable and can give a cured product having a high refractive index and adequate hardness.

IT 570358-55-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

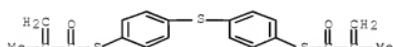
RN 570358-55-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
2-ethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with diethoxybenzene,
3,3'-thiobis[1,2-propanedithiol] and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3



CM 2

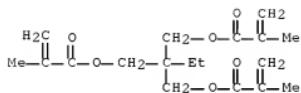
CRN 42450-84-0

CMF C6 H14 S5



CM 3

CRN 3290-92-4
 CMF C18 H26 O6



CM 4

CRN 1321-74-0
 CMF C10 H10
 CCI IDS



2 [d1 - CH = CH2]

IC ICM C08K003-00
 INCL 522071000
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38, 73
 IT Optical materials
 (photocurable thiobis(propanedithiol) compns. for cured
 products with high refractive index and moderate hardness)
 IT Polythioethers
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (photocurable thiobis(propanedithiol) compns. for cured
 products with high refractive index and moderate hardness)
 IT Polyurethanes, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
 or engineered material use); PREP (Preparation); USES (Uses)
 (thio-; photocurable thiobis(propanedithiol) compns.
 for cured products with high refractive index and moderate
 hardness)
 IT 570358-50-8P 570358-51-9P 570358-52-0P 570358-53-1P
 570358-54-2P 570358-55-3P 612849-03-3P 612849-04-4P
 612849-05-5P 612849-06-6P 612849-07-7P 612849-08-8P
 612849-09-9P 612849-10-2P 612849-16-8P 612849-17-9P
 612849-19-1P 612849-20-4P 612849-21-5P 612849-23-7P
 612849-25-9P 612849-27-1P 612849-29-3P 612849-31-7P
 612849-32-8P 612849-34-0P 612849-35-1P 612849-37-3P

612849-39-5P	612849-41-9P	612849-43-1P	612849-44-2P
612849-45-3P	612849-46-4P	612849-47-5P	612849-48-6P
612849-49-7P	612849-50-0P	612849-51-1P	612849-52-2P
612849-53-3P	612849-54-4P	612849-55-5P	612849-56-6P
612849-57-7P	612849-58-8P	612849-59-9P	612849-60-2P
612849-61-3P	612849-62-4P	612849-63-5P	612849-64-6P
612849-65-7P	612849-66-8P	612849-67-9P	612849-68-0P
612849-69-1P	612849-70-4P	612849-71-5P	612849-72-6P
612849-73-7P	612849-74-8P	612849-75-9P	612849-76-0P
612849-77-1P	613237-84-6P	613237-85-7P	613237-86-8P
613237-87-9P	613237-88-0P		

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

IT 42450-84-0P 570358-48-4P 570358-49-5P 612848-99-4P
612849-01-1P 612849-11-3P 612849-12-4P 612849-13-5P
612849-14-6P 613237-81-3P 613237-82-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

IT 612849-00-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (reaction with acryloyl chloride; photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

IT 108-98-5, Thiophenol, reactions 624-39-5, 1,4-Benzene dithiol 3570-55-6, 2,2'-Thiodiethanethiol 30499-56-0, Mercaptomethylstyrene

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction with diepisulfide; photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

IT 106-54-7, 4-Chlorothiophenol 814-68-6, Acryloyl chloride 30030-25-2 90802-17-8

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction with polythiol; photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 5 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 20031616076 HCPLUS [Full-text](#)
 DOCUMENT NUMBER: 139:150541
 TITLE: Photocurable compositions with high refractive index and cured products thereof
 INVENTOR(S): Ishii, Kenji; Okazaki, Hitoshi; Kondo, Mitsuteru
 PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

JP 2003226718	A	20030812	JP 2002-30616	
				200202 07
			<--	
JP 4126918	B2	20080730		
US 20030195270	A1	20031016	US 2003-359271	
				200302 06
			<--	
US 6872333	B2	20050329		
US 20050154073	A1	20050714	US 2004-997	
				200412 02
			<--	
US 7026372	B2	20060411		
PRIORITY APPLN. INFO.:			JP 2002-30616	A
				200202 07
			<--	
			JP 2002-305532	A
				200210 21
			<--	
			JP 2002-354195	A
				200212 05
			<--	
			US 2003-359271	A3
				200302 06
			<--	

AB The compns., giving cured products with moderate hardness, useful for optical materials, comprise 3,3'-thiobis(propane-1,2-dithiol) (I), ≥1 ene compds., and ≥1 photoradical initiators. Thus, I 35, 3,3'-thiobis[1,2-di(1-propenylthio)propane] 65, and 2,2-dimethoxy-2-phenylacetophenone 1 part were blended, degassed, poured into a glass sheet-made mold, irradiated with UV, and released from the mold to give a cured product showing nD 1.658 and pencil hardness H.

IT 570358-55-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

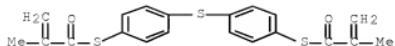
RN 570358-55-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with diethenylbenzene, 3,3'-thiobis[1,2-propanedithiol] and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

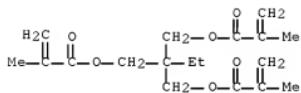
CMF C20 H18 O2 S3



CM 2

CRN 42450-84-0
CMF C6 H14 S5

CM 3

CRN 3290-92-4
CMF C18 H26 O6

CM 4

CRN 1321-74-0
CMF C10 H10
CCI IDS

2 [Di-CH=CH2]

IC ICM C08F020-38
 ICS C08F012-36; C08G075-04
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 73
 IT Optical materials
 (photocurable thiobis(propanedithiol) compns. for cured
 products with high refractive index and moderate hardness)
 IT 570358-50-8P 570358-51-9P 570358-52-0P 570358-53-1P
 IT 570358-54-2P 570358-55-3P

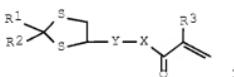
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)
 IT 42450-84-OP 570358-48-4P 570358-49-5P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (photocurable thiobis(propanedithiol) compns. for cured products with high refractive index and moderate hardness)

L30 ANSWER 6 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:424518 HCPLUS Full-text
 DOCUMENT NUMBER: 139:7852
 TITLE: Dithiolane-containing curable (meth)acrylate compositions, cured products, and optical materials therefrom
 INVENTOR(S): Imai, Masao; Nakamura, Mitsuo; Fujiyama, Takahiro; Otsuji, Atsuo
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003160619	A	20030603	JP 2001-359902	200111 26
JP 3859497	B2	20061220	JP 2001-359902	200111 26

PRIORITY APPLN. INFO.: <--
 <--
 <--

GI



AB The compns. comprise I [R1, R2 = H, (substituted) alkyl, aralkyl, aryl; R3 = H, alkyl; X = O, S; with the proviso that when X = O, R1 = (substituted) aryl; Y = difunctional organic group], OH-bearing (meth)acrylate esters, and polymerization initiators. Optical materials (e.g., lenses) from the compns. show high refractive index and good heat and mech. properties. Thus, a composition containing 4-acryloylthiomethyl-1,3-dithiolane and bisphenol A diglycidyl ether dimethacrylate was charged into a mold and photopolymerd. to give a transparent lens showing refractive index 1.616, Abbe number 36.6, and high impact resistance.
 IT 532547-09-4P 532547-16-3P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical

or engineered material use); PREP (Preparation); USES (Uses)
 (dithiolane-containing curable (meth)acrylate compns. for optical
 lenses)

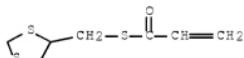
RN 532547-09-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
 (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
 ester, polymer with S-(1,3-dithiolan-4-ylmethyl) 2-propenethioate
 (9CI) (CA INDEX NAME)

CM 1

CRN 406922-31-4

CMF C7 H10 O S3

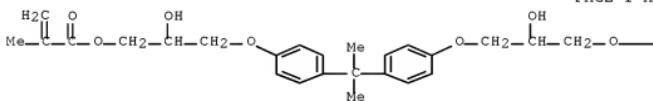


CM 2

CRN 1565-94-2

CMF C29 H36 O8

PAGE 1-A



PAGE 1-B



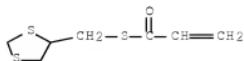
RN 532547-16-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
 (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
 ester, polymer with S-(1,3-dithiolan-4-ylmethyl) 2-propenethioate
 and α,α' -[(1-methylethylidene)di-4,1-
 phenylene]bis[ω -[(1-oxo-2-propenyl)oxyl]poly(oxy-1,2-
 ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

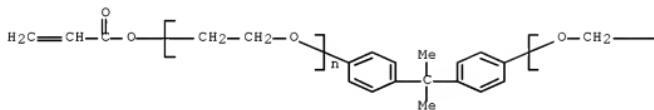
CRN 406922-31-4

CMF C7 H10 O S3

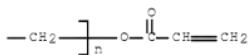


CRN 64401-02-1
 CMF (C₂H₄O)_n (C₂H₄O)_n C₂₁H₂₀O₄
 CCI PMS

PAGE 1-A



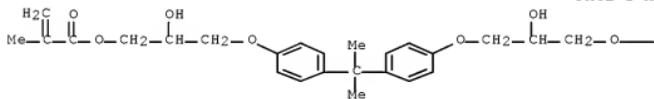
PAGE 1-B



CM 3

CRN 1565-94-2
 CMF C₂₉H₃₆O₈

PAGE 1-A



PAGE 1-B



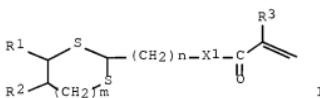
IC ICM C08F220-38
 ICS C08F220-32; G02B001-04

CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 73
 IT 532547-09-4P 532547-13-OP 532547-16-3P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (dithiolane-containing curable (meth)acrylate compns. for optical lenses)

L30 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:424517 HCAPLUS Full-text
 DOCUMENT NUMBER: 139:7851
 TITLE: Cyclic dithioacetal group-containing curable (meth)acrylate compositions, cured products, and optical materials therefrom
 INVENTOR(S): Imai, Masao; Nakamura, Mitsuo; Fujiyama, Takahiro; Otsuji, Atsuo
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003160618	A	20030603	JP 2001-359901	200111 26
<--				
PRIORITY APPLN. INFO.:		JP 2001-359901		
		200111 26		
<--				

GI



AB The compns. comprise I (R1, R2 = H, alkyl; R1 and R2 may form ring; R3 = H, Me; X1 = O, S; m = 0-3; n = 1-4), OH-bearing (meth)acrylate esters, and polymerization initiators. Optical materials (e.g., lenses) from the compns. show high refractive index and good heat and mech. properties. Thus, a composition containing 2-acryloylthiomethyl-1,3-dithiolane and bisphenol A diglycidyl ether dimethacrylate was charged into a mold and photopolymerd. to give a transparent lens showing refractive index 1.615, Abbe number 37.0, and high impact resistance.

IT 532547-09-4P 532547-16-3P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(cyclic dithioacetal group-containing curable (meth)acrylate compns.
for optical lenses)

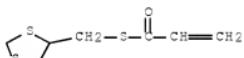
RN 532547-09-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
ester, polymer with S-(1,3-dithiolan-4-ylmethyl) 2-propenethioate
(9CI) (CA INDEX NAME)

CM 1

CRN 406922-31-4

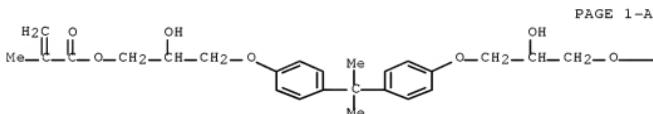
CMF C7 H10 O S3



CM 2

CRN 1565-94-2

CMF C29 H36 O8



PAGE 1-B

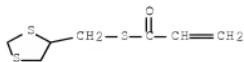
RN 532547-16-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]
ester, polymer with S-(1,3-dithiolan-4-ylmethyl) 2-propenethioate
and α,α' -[(1-methylethylidene)di-4,1-
phenylene]bis[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-
ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

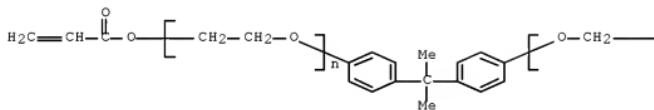
CRN 406922-31-4

CMF C7 H10 O S3

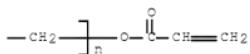


CRN 64401-02-1
 CMF (C₂H₄O)_n (C₂H₄O)_n C₂₁H₂₀O₄
 CCI PMS

PAGE 1-A



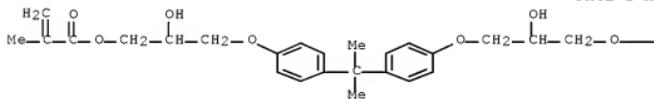
PAGE 1-B



CM 3

CRN 1565-94-2
 CMF C₂₉H₃₆O₈

PAGE 1-A



PAGE 1-B



IC ICM C08F220-38
 ICS C08F220-28; C08J005-00; G02B001-04; C08L033-14

CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 73
 IT 532547-09-4P 532547-13-OP 532547-16-3P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cyclic dithioacetal group-containing curable (meth)acrylate compns. for optical lenses)

L30 ANSWER 8 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:396329 HCPLUS Full-text
 DOCUMENT NUMBER: 138:409434
 TITLE: Hologram recording material composition and hologram recording
 INVENTOR(S): Ichihashi, Taichi; Tanigawa, Hideo; Kamada, Yutaka; Nakamura, Shoukichi; Matsuo, Takashi; Hashimoto, Akira; Sakashita, Takahiro; Yokoyama, Kazunori
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ., 24 pp., Cont.-in-part of U.S. Ser. No. 372,102, abandoned.
 CODEN: USXKC0
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030096172	A1	20030522	US 2001-975560	200110 12 ---
JP 1998-227818 A 199808 12 ---				
US 1999-372102 B2 199908 11 ---				

AB A hologram recording material composition is disclosed, comprising (A) an allyl-based prepolymer having at least one allyl group in a mol., (B) a (meth)acrylate-based compound having at least one polymerizable unsatd. group in a mol., and (C) a photopolymn. initiator, wherein a difference between a refractive index of said allyl-based prepolymer (A) and a refractive index of a polymer of said (meth)acrylate compound (B) is 0.005 or more. The holog. recording layer of the invention suffers no drip or shift from the substrate when it is slanted, and it is thus easy to transport. The recording layer obtained from the hologram recording material composition of the invention is substantially in a solid state, it is excellent in handling as when touched with hand, it does not contaminate hand.

IT 529514-36-1P 529514-37-2P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (hologram recording material composition and hologram recording)

RN 529514-36-1 HCPLUS

CN 1,2-Benzenedicarboxylic acid, di-2-propenyl ester, polymer with 9-ethenyl-9H-carbazole, 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate,

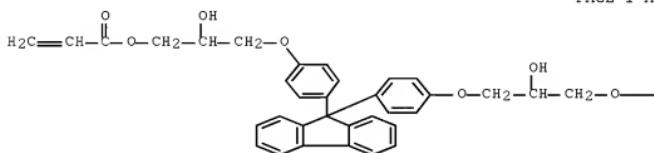
S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate),
 2,4,6-tribromophenyl 2-methyl-2-propenoate and 2,4,6-tribromophenyl
 2-propenoate (9CI) (CA INDEX NAME)

CM 1

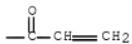
CRN 143182-97-2

CMF C37 H34 O8

PAGE 1-A



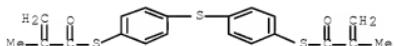
PAGE 1-B



CM 2

CRN 129283-82-5

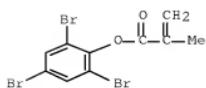
CMF C20 H18 O2 S3



CM 3

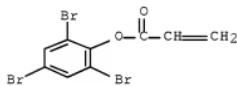
CRN 377221-71-4

CMF C10 H7 Br3 O2



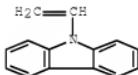
CM 4

CRN 37411-77-3
 CMF C9 H5 Br3 O2



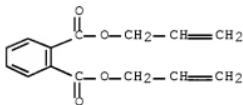
CM 5

CRN 14841-13-5
 CMF C14 H11 N



CM 6

CRN 131-17-9
 CMF C14 H14 O4



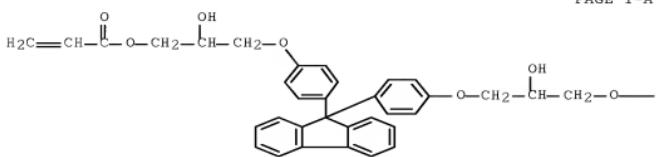
RN 529514-37-2 HCPLUS

CN 1,2-Benzenedicarboxylic acid, di-2-propenyl ester, polymer with 9H-fluoren-9-ylidenebis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]di-2-propenoate, S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) and 2,4,6-tribromophenyl 2-propenoate (9CI) (CA INDEX NAME)

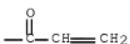
CM 1

CRN 143182-97-2
 CMF C37 H34 O8

PAGE 1-A

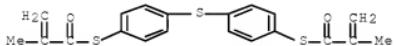


PAGE 1-B



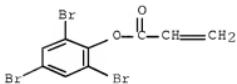
CM 2

CRN 129283-82-5
 CMF C20 H18 O2 S3



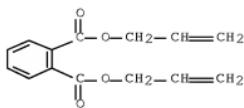
CM 3

CRN 3741-77-3
 CMF C9 H5 Br3 O2



CM 4

CRN 131-17-9
 CMF C14 H14 O4



IC ICM G03H001-04
 ICS G03C001-73
 INCL 430001000; 430002000; 359003000; 430281100
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38
 ST hologram recording material compn allyl acrylate polymer
 photosensitive plate
 IT Printing plates
 (photosensitive; hologram recording material composition and
 hologram recording)
 IT 108-98-5DP, Thiophenol, reaction products with
 diallylorthophthalate, polymer with diacrylate derivative 2223-82-7DP,
 NK Ester A-NPG, polymers with diallylorthophthalate derivs.
 2996-92-1DP, Phenyltrimethoxysilane, reaction products with
 diallylorthophthalate, polymer with diacrylate derivative 7726-95-6DP,
 Bromine, reaction products with diallylorthophthalate, polymer with
 diacrylate derivative 25053-15-0DP, Daiso DAP A, reaction products
 with phenyltrimethoxysilane, thiophenol and bromine; polymers with
 diacrylate derivative 34937-44-5P 52285-12-8P 108891-12-9P
 112785-75-8P 119845-81-7P 123415-31-6P 148140-87-8P
 327040-71-1P 327040-73-3P 327040-74-4P 335159-45-0P
 335159-46-1P 335159-47-2P 335159-48-3P 335159-49-4P
 335159-50-7P 529514-28-1P 529514-29-2P 529514-30-5P
 529514-31-6P 529514-32-7P 529514-33-8P 529514-34-9P
 529514-35-0P 529514-36-1P 529514-37-2P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (hologram recording material composition and hologram recording)

L30 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:427824 HCAPLUS Full-text
 DOCUMENT NUMBER: 137:26762
 TITLE: Photosensitive ceramic compositions
 for laminated substrates used as high-frequency
 circuit, etc.
 INVENTOR(S): Yamashiki, Tomoya; Masaki, Takaki; Oshita,
 Hiroshi
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002162735	A	20020607	JP 2000-362382	

2000011

29

<--

PRIORITY APPLN. INFO.:

JP 2000-362382

2000011

29

<--

AB The compns. comprise inorg. powder, inorg. fine particles having average particle size 0.003-0.08 μm , and photosensitive organic components. The compns. are sinterable at lower temperature and provide via hole with high aspect ratio in high precision by photolithog.

IT 434318-26-QP, Bis(4-methacryloylthiophenyl)

sulfide-methacrylic acid-methyl methacrylate copolymer

434318-27-1P, Bis(4-methacryloylthiophenyl) sulfide-isobutyl

methacrylate-methacrylic acid copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)

(photosensitive ceramic compns. containing inorg. powder,
size-controlled inorg. fine particles, and photosensitive
organic components for fabrication of high-frequency circuit
substrates)

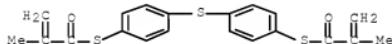
RN 434318-26-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl
2-methyl-2-propenoate and S,S'-(thiodi-4,1-phenylene)
bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3



CM 2

CRN 80-62-6

CMF C5 H8 O2



CM 3

CRN 79-41-4

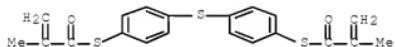
CMF C4 H6 O2



RN 434318-27-1 HCPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-methylpropyl
 2-methyl-2-propenoate and S,S'-(thiodi-4,1-phenylene)
 bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5
 CMF C20 H18 O2 S3



CM 2

CRN 97-86-9
 CMF C8 H14 O2



CM 3

CRN 79-41-4
 CMF C4 H6 O2



IC ICM G03F007-004
 ICS C08K003-00; C08L101-00; G03F007-40; H05K003-46
 CC 76-2 (Electric Phenomena)
 Section cross-reference(s): 57

ST photosensitive ceramic compn green sheet circuit board
 substrate; inorg powder acrylic monomer compn high frequency circuit
 board; silica fine particle photosensitive ceramic compn
 photolithog

IT Spinel-group minerals
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aluminum-magnesium; photosensitive ceramic compns.
 containing inorg. powder, size-controlled inorg. fine particles, and
 photosensitive organic components for fabrication of

- high-frequency circuit substrates)
- IT Aluminoborosilicate glasses
 - RL: TEM (Technical or engineered material use); USES (Uses)
(barium calcium magnesium titanoaluminoborosilicate; photosensitive ceramic compns. containing inorg. powder, size-controlled inorg. fine particles, and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT Aluminoborosilicate glasses
 - RL: TEM (Technical or engineered material use); USES (Uses)
(magnesium zinc aluminoborosilicate; photosensitive ceramic compns. containing inorg. powder, size-controlled inorg. fine particles, and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT Printed circuit boards
 - (multilayer; photosensitive ceramic compns. for fabrication of high-frequency circuit substrates)
- IT Ceramics
 - (photosensitive ceramic compns. containing inorg. powder and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT Alkali metal oxides
- Alkaline earth oxides
- Glass powders
 - RL: TEM (Technical or engineered material use); USES (Uses)
(photosensitive ceramic compns. containing inorg. powder and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT Glass ceramics
 - (photosensitive ceramic compns. containing inorg. powder, size-controlled inorg. fine particles, and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT 1303-86-2, Boria, uses 1304-28-5, Barium oxide, uses 1305-78-8, Calcia, uses
 - RL: TEM (Technical or engineered material use); USES (Uses)
(glass-ceramic or glass; photosensitive ceramic compns. containing inorg. powder, size-controlled inorg. fine particles, and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT 404961-50-8P, Bis(2-hydroxy-3-methacryloyloxypropyl)isopropylamine-Cyclomer P-ACA 250 copolymer 405081-93-8P, Bis(2-hydroxy-3-methacryloyloxypropyl)isopropylamine-Cyclomer P-ACA 250-TN-1 copolymer
 - RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photosensitive ceramic compns. containing inorg. powder, size-controlled inorg. fine particles, and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT 1306-38-3, Ceria, uses 1309-48-4, Magnesia, uses 1314-23-4, Zirconia, uses 1314-36-9, Yttria, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 13463-67-7, Titania, uses
 - RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photosensitive ceramic compns. containing inorg. powder, size-controlled inorg. fine particles, and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT 434318-25-9P, Bis(2-hydroxy-3-methacryloyloxypropyl)isopropylamine-

methacrylic acid-methyl methacrylate copolymer
 434318-26-0P, Bis(4-methacryloylthiophenyl)
 sulfide-methacrylic acid-methyl methacrylate copolymer
 434318-27-1P, Bis(4-methacryloylthiophenyl) sulfide-isobutyl
 methacrylate-methacrylic acid copolymer 434322-61-9P, Methacrylic
 acid-methyl methacrylate-styrene copolymer ester with glycidyl
 methacrylate, polymer with bis(2-hydroxy-3-
 methacryloyloxypropyl)isopropylamine and TN-1 copolymer
 434322-62-0P, Methacrylic acid-methyl methacrylate-styrene copolymer
 ester with glycidyl methacrylate, polymer with
 bis(2-hydroxy-3-methacryloyloxypropyl)isopropylamine
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (photosensitive ceramic compns. containing inorg. powder,
 size-controlled inorg. fine particles, and photosensitive
 organic components for fabrication of high-frequency circuit
 substrates)

IT 1302-88-1, Cordierite 14808-60-7, Quartz, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photosensitive ceramic compns. containing inorg. powder,
 size-controlled inorg. fine particles, and photosensitive
 organic components for fabrication of high-frequency circuit
 substrates)

L30 ANSWER 10 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:384677 HCPLUS Full-text
 DOCUMENT NUMBER: 136:394527
 TITLE: Photosensitive ceramic compositions
 for laminated substrates used as high-frequency
 circuit, etc.
 INVENTOR(S): Yamashiki, Tomoya; Masaki, Takaki; Oshita,
 Hiroshi
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2002148786	A	20020522	JP 2001-260891	200108
				30
<--				
PRIORITY APPLN. INFO.:			JP 2000-260464	A
				200008
				30
<--				

AB The compns. comprise inorg. powder and photosensitive organic components and satisfy the following requirements: (a) $N_1 - N_2 \leq 0.25$, where N_1 = refractive index of a component having the maximum refractive index and N_2 = refractive index of a component having the min. refractive index and (b) shrinkage rate after sintering is $\leq 5\%$ in the X-Y plane direction. Control of refractive index reduces reflection and scattering of light at interface of the components, thus enabling formation of via holes having high aspect ratio in high precision. Preferably compns. of the inorg. powder are also described.
 IT 428441-97-8P, Bis(4-methacryloylthiophenyl)

sulfide-glycidyl methacrylate-methacrylic acid-methyl
methacrylate-styrene copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(photosensitive ceramic compns. for fabrication of
high-frequency circuit substrates)

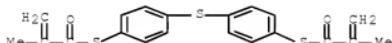
RN 428441-97-8 HCPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, methyl
2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and
S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
(CA INDEX NAME)

CM 1

CRN 129283-82-5

CMF C20 H18 O2 S3



CM 2

CRN 106-91-2

CMF C7 H10 O3



CM 3

CRN 100-42-5

CMF C8 H8



CM 4

CRN 80-62-6

CMF C5 H8 O2



CM 5

CRN 79-41-4
CMF C4 H6 O2

- IC ICM G03F007-004
 ICS C04B035-16; H05K003-46
 CC 76-14 (Electric Phenomena)
 Section cross-reference(s): 57
 ST photosensitive ceramic compn green sheet circuit board
 substrate; inorg powder acrylic monomer compn high frequency circuit
 board
 IT Aluminoborosilicate glasses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (barium calcium magnesium titanoborosilicate;
 photosensitive ceramic compns. containing inorg. powder and
 photosensitive organic components for fabrication of
 high-frequency circuit substrates)
 IT Aluminoborosilicate glasses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (calium aluminoborosilicate; photosensitive ceramic
 compns. containing inorg. powder and photosensitive organic
 components for fabrication of high-frequency circuit substrates)
 IT Aluminosilicate glasses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (calium magnesium aluminosilicate; photosensitive
 ceramic compns. containing inorg. powder and photosensitive
 organic components for fabrication of high-frequency circuit
 substrates)
 IT Aluminoborosilicate glasses
 Aluminoborosilicate glasses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (magnesium zinc aluminoborosilicate; photosensitive
 ceramic compns. containing inorg. powder and photosensitive
 organic components for fabrication of high-frequency circuit
 substrates)
 IT Printed circuit boards
 (multilayer; photosensitive ceramic compns. for
 fabrication of high-frequency circuit substrates)
 IT Alkali metal oxides
 Glass powders
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photosensitive ceramic compns. containing inorg. powder
 and photosensitive organic components for fabrication of
 high-frequency circuit substrates)
 IT Ceramics
 (photosensitive ceramic compns. for fabrication of
 high-frequency circuit substrates)
 IT 1302-50-7, Celsian 1302-54-1, Anorthite 1302-67-6, Spinel
 1302-88-1, Cordierite 1302-93-8, Mullite 1304-56-9, Beryllia,
 uses 15118-03-3, Forsterite 24304-00-5, Aluminum nitride
 RL: TEM (Technical or engineered material use); USES (Uses)

- (filler; photosensitive ceramic compns. containing inorg. powder and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT 1303-86-2, Boria, uses 1305-78-8, Calcia, uses 1309-48-4, Magnesia, uses 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 12007-67-9, Boron zinc oxide (B4ZnO7) 12008-25-2, Zinc borate oxide (Zn4(BO2)6O) 13597-65-4, Zinc silicate (Zn2SiO4) 14808-60-7, Quartz, uses
- RL: TEM (Technical or engineered material use); USES (Uses) (photosensitive ceramic compns. containing inorg. powder and photosensitive organic components for fabrication of high-frequency circuit substrates)
- IT 405081-93-8P, Bis(2-hydroxy-3-methacryloyloxypropyl)isopropylamine-Cyclomer P-ACA 250-TN 1 copolymer
- RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photosensitive ceramic compns. for fabrication of high-frequency circuit substrates)
- IT 404961-50-8P, Bis(2-hydroxy-3-methacryloyloxypropyl)isopropylamine-Cyclomer P-ACA 250 copolymer 428441-97-8P, Bis(4-methacryloylthiophenyl) sulfide-glycidyl methacrylate-methacrylic acid-methyl methacrylate-styrene copolymer
- RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photosensitive ceramic compns. for fabrication of high-frequency circuit substrates)
- OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L30 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:347803 HCAPLUS Full-text
 DOCUMENT NUMBER: 136:356119
 TITLE: Antireflective triacetylcellulose film and image display device made from the same
 INVENTOR(S): Sotozono, Hirohisa; Nakamura, Kazuhiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002131514	A	20020509	JP 2000-327219	200010 26
			<--	
PRIORITY APPLN. INFO.:			JP 2000-327219	200010 26
			<--	

AB The film is prepared by coating a layer of an antireflective hard coat on a multilayered triacetylcellulose film, wherein the properties of the hard coat and fillers and fluorocompd. in the hard coat satisfy with several given conditions. Thus, a photocurable hard coat was made from DPHA in 50:50 MEK

and cyclohexanone mixture containing Irigacure 907, Kayacure DETX, and Mizukasil P 526.

IT 399510-23-7, DPHA-MPSMA copolymer

RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (hard coat; antireflective triacetylcellulose film and image display device made from the same)

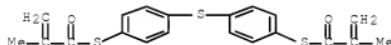
RN 399510-23-7 HCPLUS

CN 2-Propenoic acid, 2-[{3-[{(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy}methyl]-1,3-propanediyl ester, polymer with S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

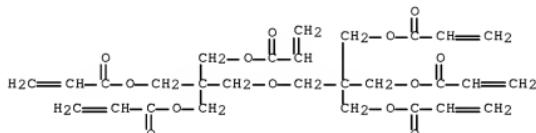
CMF C20 H18 O2 S3



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02B005-02

ICS B32B023-00; G02B001-11; G02B005-30; G02F001-1335; G09F009-00;
 B05D005-02

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74

ST image display device antireflective triacetylcellulose film;
 photocurable acrylate coating image display

IT Polymerization

(photopolymn.; antireflective triacetylcellulose film
 and image display device made from the same)

IT 67653-78-5, Dipentaerythritol hexaacrylate homopolymer
 370884-29-0, JSR-KZ 7991 399510-23-7, DPHA-MPSMA
 copolymer

RL: DEV (Device component use); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)

(hard coat; antireflective triacetylcellulose film and image

(display device made from the same)

L30 ANSWER 12 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:345203 HCPLUS Full-text
 DOCUMENT NUMBER: 136:348080
 TITLE: Anti-glare and anti-reflection film and
 polarizing plate
 INVENTOR(S): Obayashi, Tatsuhiko; Sotozono, Hirohisa
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002131507	A	20020509	JP 2000-324152	200010 24
<--				
PRIORITY APPLN. INFO.:		JP 2000-324152		
		200010 24		
<--				

AB Title film comprises a high refractive index (1.57 - 2.50) layer with average particle diameter 1.0 - 10.0 μm and a low refractive index (1.30 - 1.43) layer with ≥ 1 F-containing Si-compound prepared by a mixture of hydrolysis products and partial condensed compns. of (Rf1)aRbSiXc or X3SiRf2SiX3, and R3aSiX4-a [Rf1 = F-containing C1-20 alkyl with ≥ 1 ether or ester bonds; Rf2 = ≥ 1 F-containing divalent linkage optionally with ether or ester bonds; R1 = C1-10 alkyl; X = alkoxy, halo, or R2CO2 (R2 = H or C1-10 alkyl); R3 = C1-20 alkyl; a + b + c = 4; a, c = 1 - 3; b = 0 - 2; d = 0 - 3]. The optical film shows haze 3.0 - 20.0%, and the average reflectivity at 450 - 650 nm is < 1.8%.

IT 399510-23-7, DPBA-MPSMA copolymer

RL: DEV (Device component use); USES (Uses)
 (anti-glare and anti-reflection film and polarizing plate)

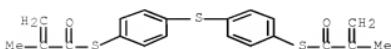
RN 399510-23-7 HCPLUS

CN 2-Propenoic acid, 2-[{3-[{(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy)methyl]-2-[(1-oxo-2-propenyl)oxy]methyl}-1,3-propanediyl ester, polymer with S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
 (CA INDEX NAME)

CM 1

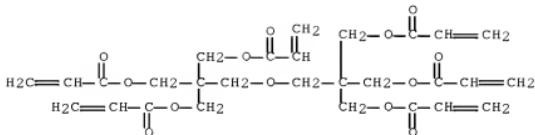
CRN 129283-82-5

CMF C20 H18 O2 S3



GM 2

CRN 29570-58-9
CMF C28 H34 013



IC ICM G02B001-11
ICS B32B007-02; B32B027-00; C09K003-00; G02B001-10; G02B005-02;
G02B005-30; G02F001-1335
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 42
IT 7631-86-9, Silica, uses 29570-58-9, DPHA 220524-99-2
355137-65-4, SX-200H 370884-29-0, JSR KZ-7991
399510-23-7, DPHA-MPSMA copolymer 404575-06-0
418253-06-2
RL: DEV (Device component use); USES (Uses)
(anti-glare and anti-reflection film and polarizing plate)
IT 82799-44-8, Kayacure DETX
RL: CAT (Catalyst use); USES (Uses)
(photosensitizer; anti-glare and anti-reflection film
and polarizing plate)
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
RECORD (2 CITINGS)

L30 ANSWER 13 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:244667 HCPLUS Full-text
DOCUMENT NUMBER: 136:264280
TITLE: Sulfur-containing (meth)acrylic acid thioesters,
their compositions, cured products, and optical
materials
INVENTOR(S): Okuma, Tadashi; Imai, Masao; Ootsuji, Atsuo
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002097223	A	20020402	JP 2000-288319	2000

PRIORITY APPLN. INFO.: JP 2000-288319

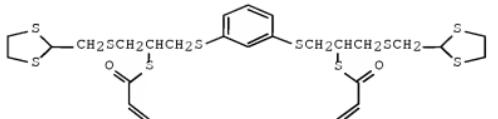
JP 2000-288319

200009
22

<--

OTHER SOURCE(S) :
GI

MAPAT 136:264280



AB The thioesters, useful for optical lenses, recording materials, liquid crystal cells, optical fiber coatings, etc., are I (R1-R4 = H, alkyl, alkoxy, nitro, halo; R5, R8 = S-containing alkyl; R6, R9 = S-containing substituent; R7, R10 = H, Me; Z1, Z2 = O, S). Thus, 2-mercaptopropylsulfide and esterified with acrylic chloride to give I (R1-R5, R7, R8, R10 = H; R6, R9 = (1,3-dithiolan-2-yl)methylthio; Z1, Z2 = S), which was mixed with Darocur 1173 (photoinitiator), resorcinol diglycidyl ether diacrylate, and divinylbenzene and cured by UV-irradiation to give a transparent lens showing reflective index 1.659, Abbe number 33.8, Tg $\geq 70^\circ$, and good impact resistance.

IT 405261-33-8P 405261-34-9P
405261-35-QP 405261-36-1P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(sulfur-containing (meth)acrylic acid thioesters for polymers for optical materials)

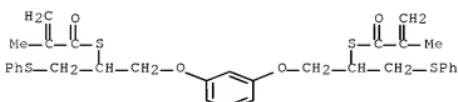
RN 405261-33-8 HCPLUS

CN 2-Propenoic acid, 1,3-phenylenebis[oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with diethenylbenzene and 1,3-phenylenebis[oxy[1-[(phenylthio)methyl]-2,1-ethanediyl]] bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 405261-29-2

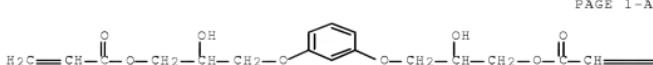
CMF C32 H34 O4 S4



CM 2

CRN 126659-18-5

CMF C18 H22 O8



PAGE 1-B

 $\equiv \text{CH}_2$

CM 3

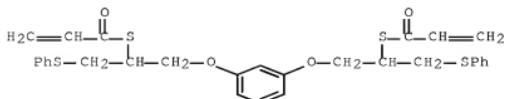
CRN 1321-74-0
 CMF C10 H10
 CCI IDS


 $^2 [\text{D}1-\text{CH}=\text{CH}_2]$

RN 405261-34-9 HCPLUS
 CN 2-Propenoic acid, 1,3-phenylenebis[oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with diethenylbenzene and 1,3-phenylenebis[oxy[1-[(phenylthio)methyl]-2,1-ethanediyl]] di-2-propenethioate (9CI) (CA INDEX NAME)

CM 1

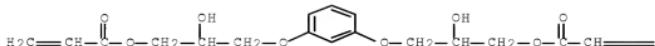
CRN 405261-26-9
 CMF C30 H30 O4 S4



CM 2

CRN 126659-18-5
 CMF C18 H22 O8

PAGE 1-A



PAGE 1-B

 $\equiv \text{CH}_2$

CM 3

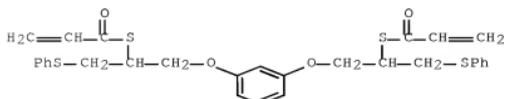
CRN 1321-74-0
 CMF C10 H10
 CCI IDS


 $2 [\text{D}1-\text{CH}\equiv\text{CH}_2]$

RN 405261-35-0 HCPLUS
 CN 2-Propenoic acid, 2-methyl-, oxydi-2,1-ethanediyl ester, polymer
 with 1,3-phenylenebis[oxy(2-hydroxy-3,1-propanediyl)]
 di-2-propenoate and 1,3-phenylenebis[oxy[1-(phenylthio)methyl]-2,1-
 ethanediyl] di-2-propenethioate (9CI) (CA INDEX NAME)

CM 1

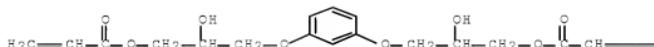
CRN 405261-26-9
 CMF C30 H30 O4 S4



CM 2

CRN 126659-18-5
CMF C18 H22 O8

PAGE 1-A



PAGE 1-B

 $\equiv \text{CH}_2$

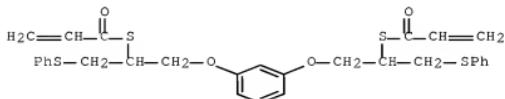
CM 3

CRN 2358-84-1
CMF C12 H18 O5

RN 405261-36-1 HCPLUS

CN 2-Propenoic acid, 2-methyl-, phenyl ester, polymer with
1,3-phenylenebis[oxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate and
1,3-phenylenebis[oxy[1-[(phenylthio)methyl]-2,1-ethanediyl]]
di-2-propenethioate (9CI) (CA INDEX NAME)

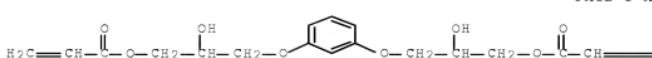
CM 1

CRN 405261-26-9
CMF C30 H30 O4 S4

CM 2

CRN 126659-18-5

CMF C18 H22 O8



PAGE 1-B

 $\equiv \text{CH}_2$

CM 3

CRN 2177-70-0
CME C10 H10 O2

IC ICM C08F020-38

ICS C07C323-12; C07C327-22; C07C327-28; C07D277-10; C07D277-16;
C07D277-56; C07D333-40; C07D339-06; C07D339-08; C07D341-00;
C08F002-50; G02B001-04; G02C007-02

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 73, 74

ST sulfur acrylate thioester polymer optical lens; photocurable
benzene dithiolanylmethylothio acryloyloxythio propyl etherIT 405261-30-5P 405261-31-6P 405261-32-7P 405261-33-8P
405261-34-9P 405261-35-0P 405261-36-1PRL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
or engineered material use); PREP (Preparation); USES (Uses)
(sulfur-containing (meth)acrylic acid thioesters for polymers for
optical materials)

L30 ANSWER 14 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:802859 HCPLUS [Full-text](#)

DOCUMENT NUMBER: 132:50401

TITLE: Active energy ray-curable resin compositions
with fast curability and transparent optical
sheets made from them

INVENTOR(S): Motonaga, Akira; Konami, Yukichi

PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
Jpn. Kokai Tokkyo Koho, 11 pp.

SOURCE: CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11349645	A	19991221	JP 1998-163365	
				199806 11
<--				
PRIORITY APPLN. INFO.:		JP 1998-163365		
				199806 11
<--				

AB The compns. useful for brightness-enhancing prism of LCD, Fresnel lens of projection TV set, lenticular lens, etc., comprise (A) terminally di(meth)acrylated (optionally alkoxyLATED and halogenated) bisphenol-based diurethane compds., 10-60, (B) vinyl compds. having >1 double bonds and viscosity at 25° of <100 mPa·s, 20-60, (C) other type of vinyl compds. 10-60 parts, and (D) radical initiators at 0.01-5 phr (based on resin forming monomers), and give cured products with refractive index (n) >1.58. Thus, heating Takenate 500 388.4 with Viscoat 192 (phenoxyethyl acrylate) 783.1 and 2-(4-acryloxyethoxy-3,5-dibromophenyl)-2-(4-hydroxyethoxy-3,5-dibromophenyl)propane 2744 g in the presence of Bu2Sn dilaurate and an antioxidant at 70° for 8 h gave a diacrylated product mixture. Mixing the mixture 22 with phenoxyethyl acrylate 20, TS 26 [2,2-bis(4-methacryloyloxyethoxy-3,5-dibromophenyl)propane] 18, BR 31 (tribromophenoxyethyl acrylate) 40 and 2-hydroxy-2-methyl-1-phenylpropan-1-one 2.0 parts at 40° gave a UV-curable resin composition for making prism.

IT 252763-64-7P

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)

(manufacture of radiation-curable resin compns. with fast curability and transparent optical sheets made from them)

RN 252763-64-7 HCPLUS

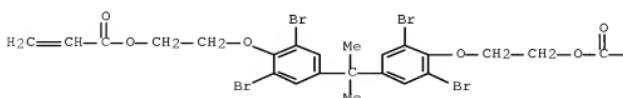
CN 2-Propenoic acid, 1,4-phenylenebis[methyleneiminocarbonyloxy-2,1-ethanediyoxy(3,5-dibromo-4,1-phenylene)(1-methylethylidene)](2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyl ester, polymer with 2-phenoxyethyl 2-propenoate and S,S'-(thiodi-4,1-phenylene)bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

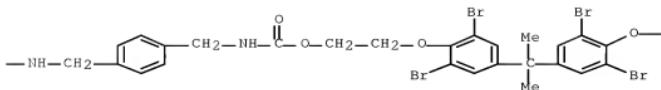
CRN 252669-30-0

CMF C54 H52 Br8 N2 O12

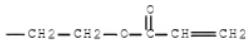
PAGE 1-A



PAGE 1-B

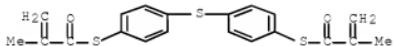


PAGE 1-C



CM 2

CRN 129283-82-5
 CMF C20 H18 O2 S3



CM 3

CRN 48145-04-6
 CMF C11 H12 O3



IC ICM C08F290-06

ICS C08F002-50; C08F220-36; G02B001-04; G02B003-06; G02B003-08

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 76

IT Polymerization catalysts

(photopolymer.; manufacture of radiation-curable resin compns. with fast curability and transparent optical sheets made from them)

IT 252669-33-3P 252669-34-4P 252669-35-5P 252669-36-6P
 252763-62-5P 252763-64-7P

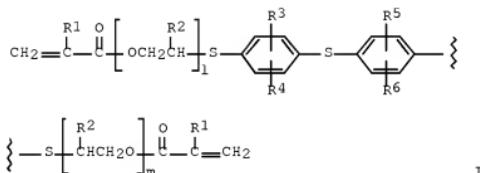
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)

(manufacture of radiation-curable resin compns. with fast curability and transparent optical sheets made from them)

DOCUMENT NUMBER: 132:36800
 TITLE: Active energy beam-curable sulfur-containing acrylate compositions and optical sheets obtained from them
 INVENTOR(S): Motonaga, Akira; Konami, Yukichi
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11349615	A	19991221	JP 1998-163364	199806 11
			<--	
PRIORITY APPLN. INFO.:			JP 1998-163364	199806 11
			<--	

GI



AB Title compns., giving cured products with $n \geq 1.60$, contain (A) S-containing di(meth)acrylates I ($R_1-R_6 = H, Me; 1, m = 0, 1$) 30-60, (B) S-containing di(meth)acrylates $CH_2:CR7C(:O)(OR_8)_n SCH_2C_6H_4CH_2S(R_8O)p C(:O)CR7:CH_2$ ($R_7 = H, Me; R_8 = C_1-4$ hydrocarbyl; $n, p = 1-5$) 20-60, (C) halo-free compds. having ≥ 1 polymerizable double bonds 10-40, and (D) radical polymerization initiators 0.01-5 parts. Thus, a composition containing bis(4-methacryloyloylthiophenyl) sulfide, p-bis(β -methacryloyloxyethylthio)xylylene, phenoxyethyl acrylate, A-BPE 4 [2,2-bis(4-acryloyloxydiethoxyphenyl)propanol], and 2-hydroxy-2-methyl-1-phenylpropan-1-one was applied on an A 4100 (PET) film and irradiated with UV light to give a tack-free prism sheet showing $n = 1.604$, high transparency, and good adhesion strength.

IT 252335-29-8P 252335-30-1P
 252335-31-2P 252335-32-3P 252335-33-4P

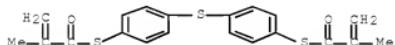
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (active energy beam-curable sulfur-containing acrylate compns. for

optical sheets)
 RN 252335-29-8 HCPLUS
 CN 2-Propenoic acid, 2-methyl-,
 1,4-phenylenebis(methylenethio-2,1-ethanediyl) ester, polymer with
 (1-methylallylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)oxy-2,1-
 ethanediyl di-2-propenoate, 2-phenoxyethyl 2-propenoate and
 S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
 (CA INDEX NAME)

CM 1

CRN 129283-82-5

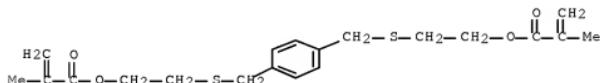
CMF C20 H18 O2 S3



CM 2

CRN 112503-98-7

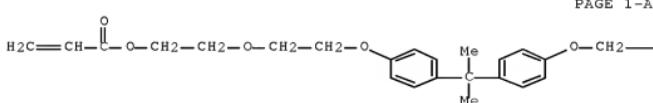
CMF C20 H26 O4 S2



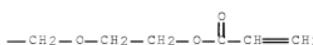
CM 3

CRN 56361-55-8

CMF C29 H36 O8



PAGE 1-A

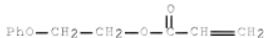


PAGE 1-B

CM 4

CRN 48145-04-6

CMF C11 H12 O3



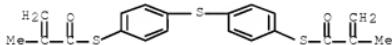
RN 252335-30-1 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
 1,4-phenylenebis(methylenethio-2,1-ethanediyl) ester, polymer with
 2-phenoxyethyl 2-propenoate and S,S'-(thiodi-4,1-phenylene)
 bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

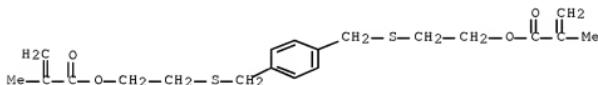
CMF C20 H18 O2 S3



CM 2

CRN 112503-98-7

CMF C20 H26 O4 S2



CM 3

CRN 48145-04-6

CMF C11 H12 O3



RN 252335-31-2 HCPLUS

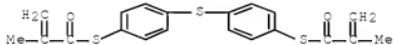
CN 2-Propenoic acid, 2-methyl-,

1,4-phenylenebis(methylenethio-2,1-ethanediyl) ester, polymer with phenylmethyl 2-methyl-2-propenoate and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

CM 1

CRN 129283-82-5

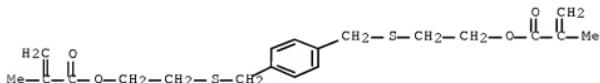
CMF C20 H18 O2 S3



CM 2

CRN 112503-98-7

CMF C20 H26 O4 S2



CM 3

CRN 2495-37-6

CMF C11 H12 O2



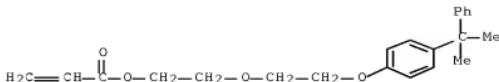
RN 252335-32-3 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
1,4-phenylenebis(methylenethio-2,1-ethanediyl) ester, polymer with
2-[2-(4-(1-methyl-1-phenylethyl)phenoxy]ethoxyethyl 2-propenoate
and S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
(CA INDEX NAME)

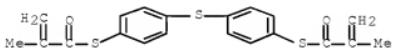
CM 1

CRN 192462-21-8

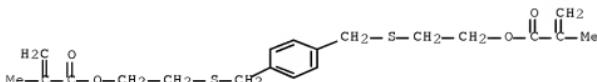
CMF C22 H26 O4



CM 2

CRN 129283-82-5
CMF C20 H18 O2 S3

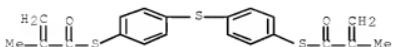
CM 3

CRN 112503-98-7
CMF C20 H26 O4 S2

RN 252335-33-4 HCPLUS

CN 2-Propenoic acid, 2-methyl-,
1,4-phenylenebis(methylenethio-2,1-ethanediyl) ester, polymer with
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) ester and S,S'-thiodi-4,1-phenylene)
bis(2-methyl-2-propenethioate) (9CI) (CA INDEX NAME)

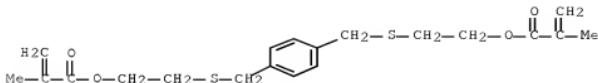
CM 1

CRN 129283-82-5
CMF C20 H18 O2 S3

CM 2

CRN 112503-98-7

CMF C20 H26 O4 S2

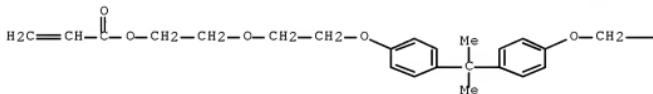


CM 3

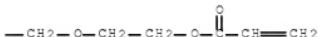
CRN 56361-55-8

CMF C29 H36 O8

PAGE 1-A



PAGE 1-B



IC ICM C08F002-50

ICS C08F220-38; G02B001-04; G02B003-06; G02B003-08

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73

ST photocurable thio acrylate optical sheet transparency;
refractive index photocurable thio acrylate polymer; prism
photocurable thio acrylate polymer

IT 252335-29-8P 252335-30-1P

252335-31-2P 252335-32-3P 252335-33-4P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical
or engineered material use); PREP (Preparation); USES (Uses)
(active energy beam-curable sulfur-containing acrylate compns. for
optical sheets)

L30 ANSWER 16 OF 16 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1992:540554 HCPLUS Full-text

DOCUMENT NUMBER: 117:140554

ORIGINAL REFERENCE NO.: 117:24199a,24202a

TITLE: Electrophotographic lithographic master plates

INVENTOR(S): Kato, Eiichi; Osawa, Sadao

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

September 4, 2009

10/553,488

110

FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03211557	A	19910917	JP 1990-7692	199001 17
<--				
PRIORITY APPLN. INFO.:		JP 1990-7692 199001 17		
<--				

AB In the title lithog. master plate, comprising an elec. conductive support and a photoconductive layer containing a photoconductive compound and a binder resin, and used to prepare a lithog. plate by elec. charging, imagewise exposing, developing to form a toner image, and removing the photoconductor layer from image-nonbearing regions, the binder resin contains ≥ 1 polymeric components which undergo polymer backbone cleavage upon irradiation with actinic radiation and ≥ 1 polymeric components which yield acid groups upon irradiation with actinic radiation. The material has improved photosensitivity and gives plates with good printing characteristics.

IT 143451-69-3

RL: USES (Uses)
(binder resin, electrophotog. lithog. master plate from)

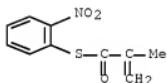
RN 143451-69-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with diphenylmethanone
O-(2-methyl-1-oxo-2-propenyl)oxime, 2-methylphenyl
2-methyl-2-propenoate and S-(2-nitrophenyl)
2-methyl-2-propenethioate (9CI) (CA INDEX NAME)

CM 1

CRN 143451-68-7

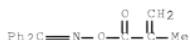
CMF C10 H9 N O3 S



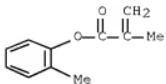
CM 2

CRN 86804-16-2

CMF C17 H15 N O2



CM 3

CRN 74937-80-7
CMF C11 H12 O2

CM 4

CRN 79-41-4
CMF C4 H6 O2

IC ICM G03G005-05

ICS C08L057-00; C08L057-10; C08L057-12; G03G013-26

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 143435-00-1 143435-02-3 143435-03-4 143435-04-5 143435-05-6
143435-06-7 143435-07-8 143435-08-9 143435-10-3 143451-60-9
143451-62-1 143451-63-2 143451-65-4 143451-67-6
143451-69-8 143451-71-2

RL: USES (Uses)

(binder resin, electrophotog. lithog. master plate from)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

=>